





Language  
English

Patent information

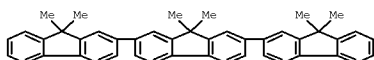
PATENT NO.	IND	DATE	APPLICATION NO.	DATE
EP 2005027694	AL	20051215	EP 2005-131392	20050914
JP 2006020865	A	20060202	JP 2004-285240	20040629

Abstract  
Light-emitting diodes are disclosed which comprise an anode, a cathode, and an organic light-emitting layer sandwiched between the anode and the cathode, in which the organic light-emitting layer is composed of a host material and one or more kinds of dopants, a difference in electron affinity between the host material and at least one kind of the dopants is 0.3 eV or less, and a difference in ionization potential between the host material and the at least one kind of the dopants is 0.5 eV or less.

HO Structure

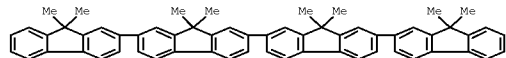
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Chemical or Trade Name  
2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl- (CA INDEX NAME)



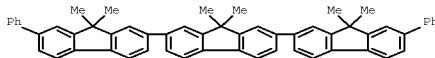
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Chemical or Trade Name  
2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl- (CA INDEX NAME)



CAS Registry Number  
970764-09-7 CASDIS

Chemical or Trade Name  
2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl-2,3'-diethyl- (CA INDEX NAME)



DE CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

LF ANDREWS 7 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN  
Accession Number  
2005120714 CAPLUS [2005120714](#)  
Document Number  
144170502

Title  
Metallophthalocyanines with halo defects as models to investigate the origin of green emission from polyfluorenes. Synthesis, self-assembly, and photophysical properties

Author(s)  
Chen, Chuanxin; Yin, Chang; Eickelmann, Volker; Ziegler, Andreas; Lauer, Christian; Wegner, Gerhard

Patent Assignee/Corporate Source  
Max Planck Institute for Polymer Research, Mainz, 55128, Germany

Source  
Chemistry-A European Journal (2006), 11 (25), 6054-6065 CODEN: CHEUEJ, ISSN: 0947-8590

Document Type  
Journal

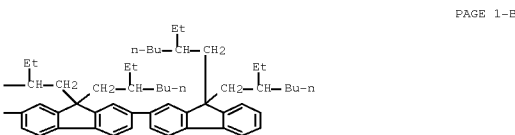
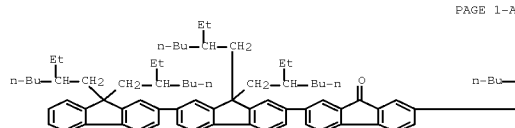
Language  
English

Abstract  
Oligofluorenes (n = triene, pentatriene, and heptatriene) with one fluorenone unit in the center (CFn; n = 3, 5, or 7) were synthesized and used as models to understand the origin of the low-energy emission band in the photoluminescence and electroluminescence spectra of some polyfluorenes. All compounds form glasses with Tg at 20 °C (CF3), 50 °C (CF5), and 57 °C (CF7). Oligomers CF3 and CF7 exhibit amorphous liquid crystalline phases that undergo transition to isotropic melt at 152 and 325 °C, respectively. Oligomer CF5 could be obtained in form of single crystals. The fluorescence and phosphorescence spectra of the neat and thin films reveal a defect located at the central fluorenone unit. The packing pattern precludes formation of excimers. Electrochromic properties were investigated by cyclic voltammetry. The ionization potential (Ip) and electron affinity (Ea) were calculated from these data. Studies of the photophysical properties of CFn in solution and thin films to elucidate and time-resolved fluorescence spectroscopic measurements suggest efficient formation of excitation energy from the photoexcited fluorenone segments to the low-energy fluorenone sites by both intra- and intermolecular hopping events whereby they give rise to green emission. Intermolecular energy transfer was investigated by using a model system composed of a highly colored low polyfluorene (PF3) doped with CF3. Fluorescence energy transfer depends upon PF3/CF3 ratio. The energy transfer efficiency increases predictably with increasing concentration of CF3.

HO Structure

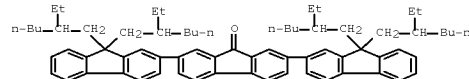
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Chemical or Trade Name  
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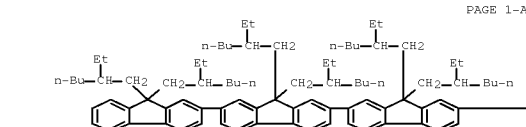
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Chemical or Trade Name  
[2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl-2,3'-diethyl-]n (CA INDEX NAME)



CAS Registry Number  
677058-70-7 CASDIS

Chemical or Trade Name  
[2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl-2,3'-diethyl-]n (CA INDEX NAME)



Author(s)  
Wang, Wen-Tsung; Chen, Rui-Tang; Fang, Fu-Chuan; Wu, Cheng-CH; Lin, Yu-Ting

Patent Assignee/Corporate Source  
Department of Chemistry, National Taiwan University, Taipei, 106, Taiwan

Source  
Organic Letters (2005), 7 (26), 3625 CODEN: ORLEPT, ISSN: 1522-7081

Document Type  
Journal

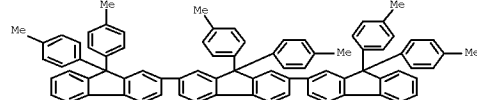
Language  
English

Abstract  
The procedure as originally published in the Supporting Information on page 1182 for preparing the starting material 4,5-diazafluorenone was incorrect. This method was based on the procedure of Fajer et al. (2000), but the reference to Fajer was omitted in the first footnote. The corrected Supporting Information section is given. Reference 1 should read 7 (a) Fajer, M.; Kemp, S.; Lefmann, E. J. Chemical Society, Perkin Trans. 1 2000, 071; (b) Miquelroy, J.-P.; Wright, K.; Walekarn, M.; Forquies, F.; Chata, M.; Tondra, G. Eur. J. Organic Chemistry 2001, 10, 1621; (c) Bailey, P. A. B.; Connor, J. A.; Trull, C. J.; Power, D. C.; Powell, A. A. J. Chemical Society, Perkin Trans. 1 1992, 1601.

HO Structure

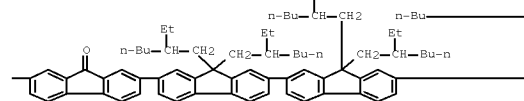
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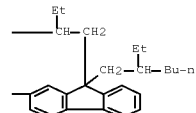


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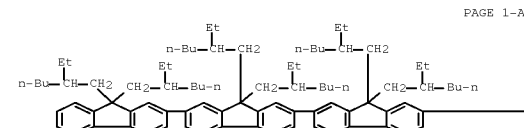


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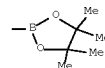


CAS Registry Number  
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Chemical or Trade Name  
2,3'-(1',3'')-Di-4H-Ethenone, 9,9,9',9'',9'''-hexamethyl-2,3'-diethyl- (CA INDEX NAME)



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DE CITING REF COUNT: 60 THERE ARE 60 CAPLUS RECORDS THAT CITE THIS RECORD (60 CITINGS)

LF ANDREWS 6 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN  
Accession Number  
2005120514 CAPLUS [2005120514](#)  
Document Number  
14407175

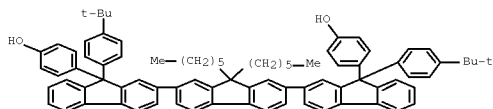
Title  
4,5-diazafluorenone-incorporated tetra-aryldiarylenes: a novel molecular doping strategy for improving the electron injection property of a highly efficient OLED blue emitter [Excerpt to document cited in CA143007640]



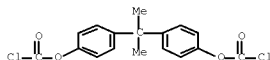
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Chemical or Trade Name  
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CIN 84920-46-4  
COP 037 912 03



CA  
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CIN 84920-46-4  
COP 037 912 03

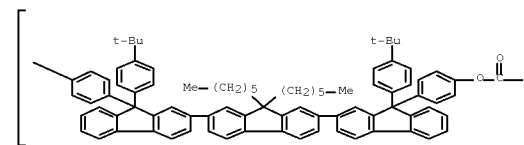


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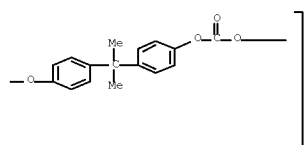
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Chemical or Trade Name  
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PAGE 1-A



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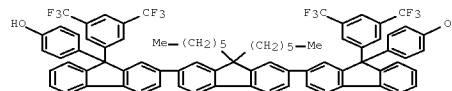


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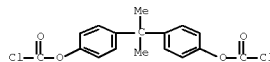
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Chemical or Trade Name  
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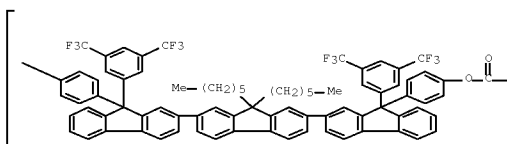


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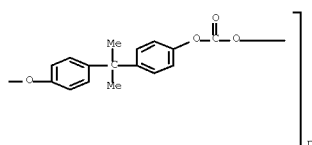
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Chemical or Trade Name  
Polycyclopentadienyl-4-phenylene(1-methylthiylidene)-1,4-phenyleneacetylenyl-4-phenylene(9,9'-bis[1,1'-dimethylthiyl]phenyl)-9,9'-diethyl-2,2'-bis-(ter-9H-fluorene)-9,9'-diyl[di-4-phenylene] (CA INDEX NAME)

PAGE 1-A



PAGE 1-B

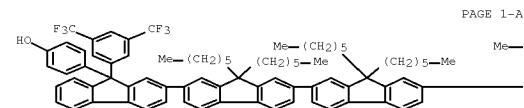


CAS Registry Number

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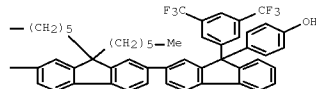
Chemical or Trade Name  
Carbochalcidic acid, C,C'-[(1-methylthiylidene)di-4,1-phenylene] ester, polymer with 4,4'-(9,9'-bis[1,1'-dimethylthiyl]phenyl)-9,9'-diethyl-2,2'-bis-(ter-9H-fluorene)-9,9'-diyl[di(phenyl)] (CA INDEX NAME)

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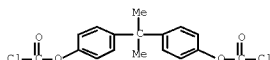


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PAGE 1-B



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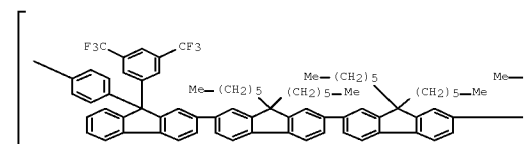


CAS Registry Number

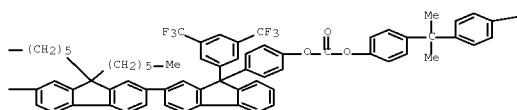
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Chemical or Trade Name  
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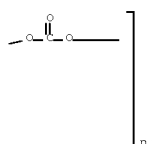
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PAGE 1-C

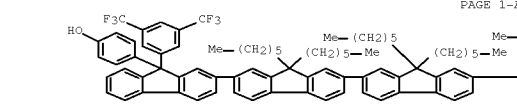


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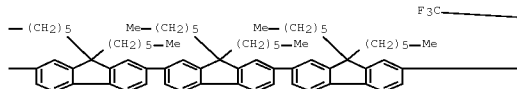
Chemical or Trade Name  
Carbochalcidic acid, C,C'-[(1-methylthiylidene)di-4,1-phenylene] ester, polymer with 4,4'-(9,9'-bis[1,1'-dimethylthiyl]phenyl)-9,9'-diethyl-2,2'-bis-(ter-9H-fluorene)-9,9'-diyl[di(phenyl)] (CA INDEX NAME)

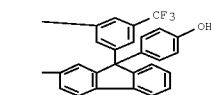
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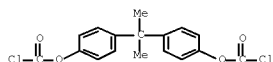
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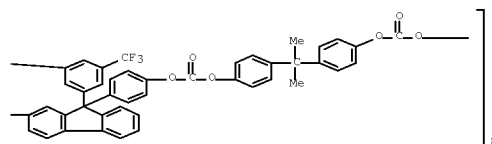
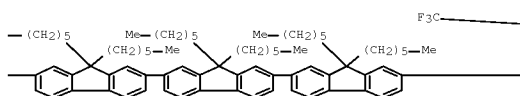
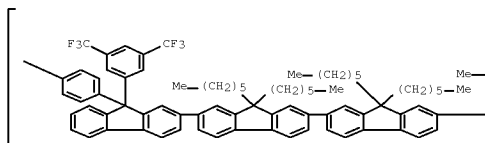




CIN 2  
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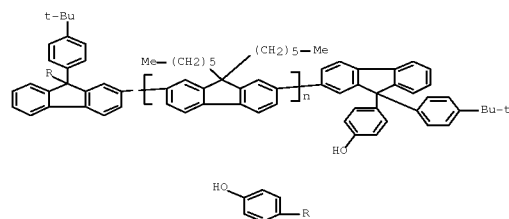
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CAS Registry Number  
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Chemical or Trade Name  
Carbonylchloridic acid, (1-methylethylidene)di-4,1-phenylene ester, polymer  
with 9,9-bis[3-[4-(1,1-dimethylethyl)phenyl]-9-(4-  
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(9C1) (CA INDEX NAME)

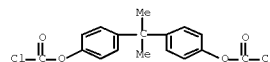
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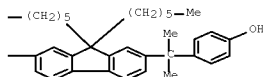
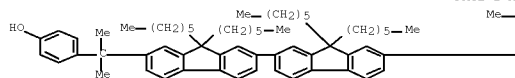


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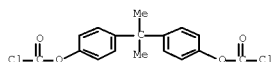
Chemical or Trade Name  
Carbonylchloridic acid, (1-methylthiylidene)di-2,1-phenylene ester, polymer with 4,4'-[[[2,9,9',9',9',9'-hexafluoryl[2,2',7',2''-ter-9H-fluorene]-7,7''-diylbis(1-methylthiylidene)]bis]phenol] (ICI) (CA INDEX NAME)

CDE

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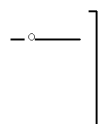
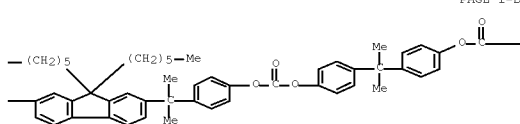
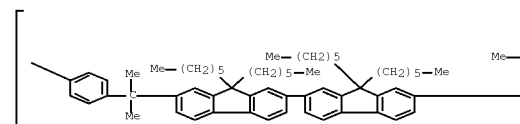


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CAS Registry Number  
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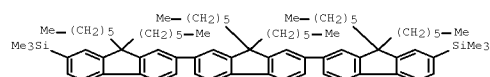
Chemical or Trade Name  
Poly[oxyacarbonyloxy-1,4-phenylene(1-methylathylidene)-1,4-phenyleneoxyacarbonyloxy-1,4-phenylene(1-methylathylidene)]<sub>9,9',9'',9''',9''''</sub>-hexahexyl[2,2':7',2''-ter-9H-fluorene-7,7'''-diyl(1-methylathylidene)-1,4-phenylene] (9CI) (CA INDEX NAME)



CAS Registry Number  
865152-19-8    CARGILL

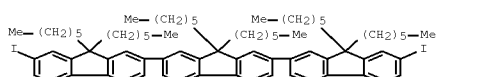
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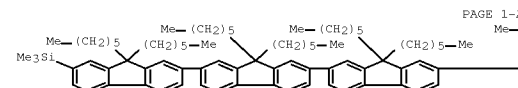
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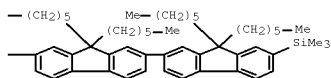
Chemical or Trade Name  
2,2',7',7'-Tetra-9H-fluorene, 9,9,9',9',9'',9''-hexaheptyl-2,7''-diiodo-  
(CA INDEX NAME)



CAS Registry Number  
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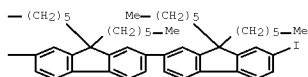
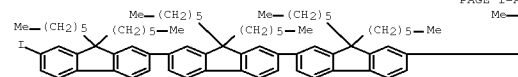
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diylbis(trimethyl- (9CI) (CA INDEX NAME)





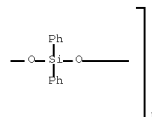
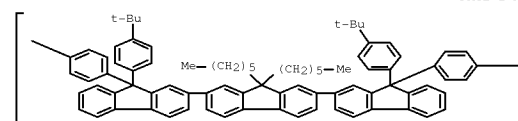
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845158-36-2 CAS#110

Chemical or Trade Name  
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2,2',2'',2'''-(9''',9''',9''',9''')-Decahexyl-7,7''''-diiodo- (C)  
(INDEX NAME)



CAS Registry Number  
589222-89-2 CAS#117

Chemical or Trade Name  
Poly[oxy(diphenylsilyl)oxy-1,4-phenylene]9,9'-bis[4-(1,1-dimethylsilyl)phenyl]-9,9'-diheptyl[2,2':7':2''-ter-9H-fluorene]-9,9'-diyl-1,4-phenylene] (3CI) (CA INDEX NAME)

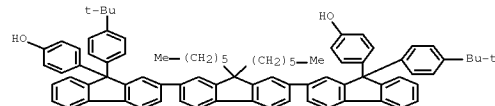


CAS Registry Number  
362565-32-2 CAPLUS

Chemical or Trade Name  
Phenol, 4,4'-[9,9'-bis[4-(1,1-dimethylethyl)phenyl]-9',9'-  
dihexyl[2,2':7',2''-ter-9H-fluorene]-9,9'-diyl]bis-, polymer with  
2,5-bis(4-fluorophenyl)-1,3,4-oxadiazole (PCL) (CA INDEX NAME)

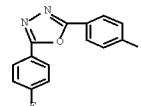
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CDN 549222-41-2  
CSE 001 002 02



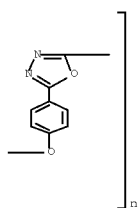
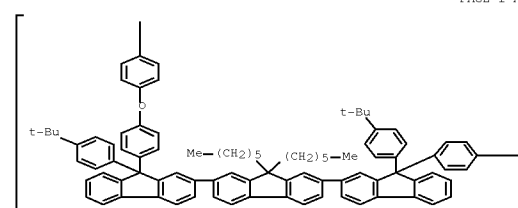
CM

CJN 324-81-2  
COTE C1A 110 73 M2 O



CAS Registry Number  
86865-90-2    CAY 119

**Chemical or Trade Name**  
Poly[1,3,4-oxadiazole-2,5-diyl-1,4-phenyleneoxy-1,4-phenylene [9,9''-bis[4-(1,1-dimethylethyl)phenyl]-9,9'-diheptyl[2,2',7',2''-ter-9H-fluorene]-9,9''-diyl]-1,4-phenyleneoxy-1,4-phenylene] (9CI) (CA INDEX NAME)



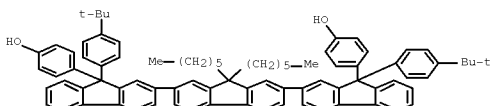
CAS Registry Number  
869565-81-3 CAS#119

Phenol, 4,4'-[3,3'-bis[4-(1,1-dimethylethyl)phenyl]-9,9'-  
dihydro[2,2']?, 2,1'-hex-9H-fluorene]-9,9'-diyl[bis-, polymer with  
2,2',3,3',4,4',5,5',6,6'-decafluoro-1,1'-bisphenyl (SCF) (CA INDEX NAME)

C94

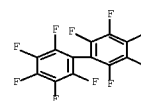
CDN 84922-4L-9

C89 C85 402



CM

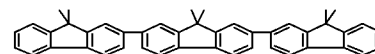
CJN 434-90-2  
CME C12 P10

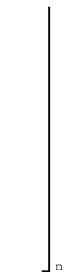
CAS Registry Number  
60180-27-2, 60180-28-3

Chemical or Trade Name  
Poly[1,4-phenylene[9,9'-bis(4-(1,1-dimethylsilyl)phenyl)-9',9'-  
dihexyl[2,2':7',2'':1'-ter-9H-fluorene]-9,9'-diyl]-1,4-  
benzoxasov[2,2':3',3'':5',6'-octafluorol[1'-bis(hexamethyl-4,4'-divinyl

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*





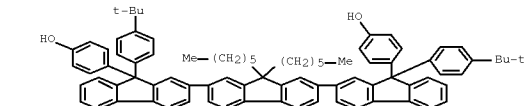
PAGE 2-B

CAS Registry Number  
069545-91-1 CAPUS

Chemical or Trade Name  
Phenol, 4,4'-(3,3'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-  
dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-  
polymer with  
diphenylsilane (KCI) (CA INDEX NAME)

CM  
1

CDN 049202-41-9  
CMP C33 402 03



CM  
2

CDN 075-12-9  
CMP C33 402 01

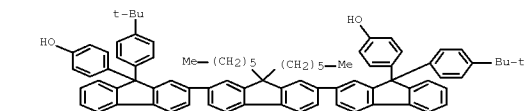


CAS Registry Number  
069545-94-6 CAPUS

Chemical or Trade Name  
Phenol, 4,4'-(3,3'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-  
dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-  
polymer with  
1,1,5,5-tetramethylsiloxane (KCI) (CA INDEX NAME)

CM  
1

CDN 049202-41-9  
CMP C33 402 02



CM  
3

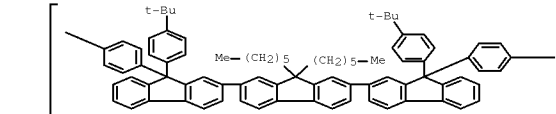
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CMP C 49 C13



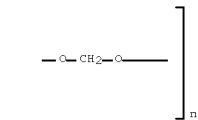
CAS Registry Number  
069545-91-9 CAPUS

Chemical or Trade Name  
Poly(1,4-phenylene(9,9'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-  
dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-  
phenyleneoxy)ethylene) (KCI) (CA INDEX NAME)

PAGE 1-A

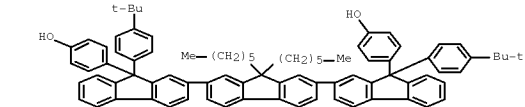


PAGE 1-B



CAS Registry Number  
973373-44-5 CAPUS

Chemical or Trade Name  
Poly(phenylene(1,4-cyclohexanediyl)oxy)ethylene, 4-phenylene(3,3'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-phenyleneoxy)ethylene) (KCI) (CA INDEX NAME)



CM  
3

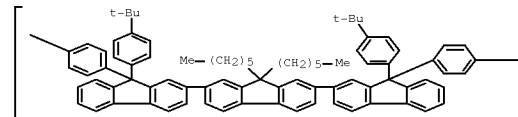
CDN 0073-44-5  
CMP C4 404 0 010



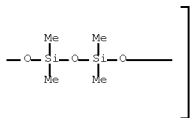
CAS Registry Number  
049545-96-7 CAPUS

Chemical or Trade Name  
Poly(1,4-phenylene(9,9'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-  
dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-  
phenyleneoxy)ethylene) (KCI) (CA INDEX NAME)

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PAGE 1-B



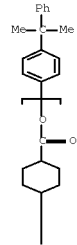
CAS Registry Number  
049545-96-7 CAPUS

Chemical or Trade Name  
Phenol, 4,4'-(3,3'-bis(4-(1,1-dimethylethyl)phenyl)-9,9'-  
dihexyl(2,2',2'-(2,2,6,6-tetramethyl-9,9'-spirobisoxane)-  
polymer with  
dichloromethane (KCI) (CA INDEX NAME)

CM  
1

CDN 049202-41-9  
CMP C33 402 03

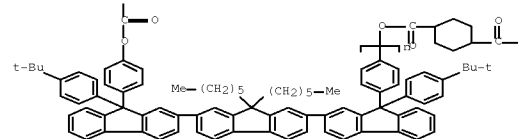
PAGE 1-A



PAGE 1-B



PAGE 2-A









C01  
 2  
 C01 75-09-2  
 C01 C 02 C12  
 C1-CH2-C1

CAS Registry Number  
844545-97-9 CAS#119

Chemical or Trade Name  
Poly[1,4-phenylene[9,9'-bis[4-(1,1-dimethylethyl)phenyl]-9'',9'-  
dihexyl[2,2':7',2''-ter-3H-fluorene]-9,9''-diyl]-1,4-  
phenylenedioxyethylenedioxy] (PEI) (CA INDEX NAME)

PAGE 1-A

PAGE 1-B

CAS Registry Number  
10042-93-2, 10042-93-2

Chemical or Trade Name  
1,4-Cyclohexanedicarbonyl dichloride, polymer with  
4,4'-[9,9'-bis[4-(1,1-dimethylethyl)phenyl]-9,9'-dihexyl]-2,2'-(*tert*-  
bis(fluorene))-9,9'-diyl]bis[phenol] (9CI) (CA INDEX NAME)

CM  
L  
CSDN 049222-4L-9  
CSDP COT H02 Q2

PAGE 1-B

CAS Registry Number  
869586-05-2 CAS#118

**Chemical or Trade Name**  
Carbonylchloride acid, (1-methylstyrylidene)di-4,1-phenylene ester, polymer with 4,4'-(9,9'-bis[3,5-bis(trifluoromethyl)phenyl]-9,9'-dihangyl[2,2':2'',2'']-ter-24-fluorene)-9,9'-diyl[bis(phenol)] and

CM  
L  
CJN 869545-73-L  
CJN C78 H42 Z12 CM

CM 2  
CEN 478935-45-4  
CNE C20 H2A N2 O2

CSN 2024-08-6  
CSN C1? H14 C12 OM

CAS Registry Number  
81933-85-2 CAS#119

Chemical or Trade Name  
Carbonyl dichloride, polymer with 4,4'-(9,9'-bis[4-(1,1-dimethylallyl)phenyl]-9',9'-dihydro[2,2':2'':2'''-ter-3H-fluorene]-9,9'-diyl)bis(phenol) and 4,4'-(1-methylallylidene)bis(phenol) (MCI) (CA INDEX

CM 1

CD 2

CDN 13170-66-6

CDP C8 H10 C12 CD

CAS Registry Number  
88565-99-1 CATE 115

Chemical or Trade Name  
Poly[1,4-phenylene[9,9'-bis[4-(1,1-dimethylallyl)phenyl]-9,9'-  
diethyl[2,2',2'-(1,4-cyclohexadiene-9,9'-diyl)-1,4-phenyleneoxy]carbonyl-  
1,4-cyclohexadienecarbonyloxy] (PCI) (CA INDEX NAME)

PAGE 1-A

CFN 049222-41-1  
CNY C81 HAS DO

CM 2  
CEN 88-05-7  
CMF CLS H16 OQ

CM 3  
CRN 75-44-5  
CMF C C12 Q

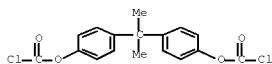
CAS Registry Number  
66666-32-6 030510

Chemical or Trade Name  
Carbonylchloridic acid, C.C'-[(1-methylstyrylidene)di-4,1-phenylene] ester,  
polymer with  $\alpha,\alpha$ -bis[9-[3,5-bis(trifluoromethyl)phenyl]-9-(4-  
hydroxyphenyl)-9H-fluoren-2-yl]poly(9,9-dihexyl-9H-fluorene-2,7-diyl) (C

CRM  
L  
CRM 009565-76-4

PAGE 1-A

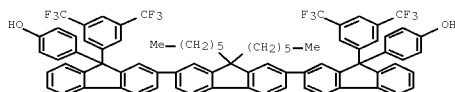
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CZM 2024-00-6  
CMF C12 H14 C12 OM



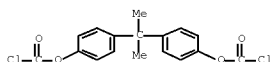
CAS Registry Number  
862565-81-2 CAPUS

Chemical or Trade Name  
Carbonylchloridic acid, C<sub>2</sub>Cl<sub>2</sub>[(1-methylstyryl)di-4,1-phenylene] ester,  
polymer with 4,4'-(9,9'-bis[3,5-bis(trifluoromethyl)phenyl]-9',9'-  
dihexyl[2,2':2'',2'''-ter-9H-fluorene]-9,9''-diyl)bis[phenyl] (CA INDEX  
NAME)

CM  
L  
CDN 869545-73-L  
CNR 674, 449, 813, 60



CM 2  
CZM 2024-00-6  
CMF C17 H1A C12 CM



CAS Registry Number  
8446-20-2, calcium

Chemical or Trade Name  
Poly[oxyacetyloxy-1,4-phenylene(1-methylsilylidene)-1,4-phenyleneoxyacetyloxy-1,4-phenylene[9,9'-bis[2,5-bis(trifluoromethyl)phenyl]-9',9'-dihexyl]2,2':7',2'-ter-9H-fluorene]-3,3'-diylidene]bisbenzylidene] (CA INDEX NAME)

CAS Registry Number  
5081-91-2 (1,4-dioxane)

Chemical or Trade Name  
Poly(9,9-dihexyl-9H-fluorene-2,7-diyl),  
6,6-bis[9-[3,5-bis(trifluoromethyl)phenyl]-9-(4-hydroxyphenyl)-  
9H-fluorene-2-yl]- (CA INDEX NAME)

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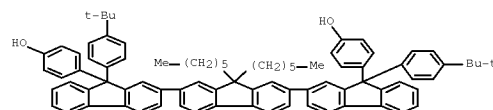
LB ANSWER 12 OF 77 CAPLUS COPYRIGHT 2010 ACS on STM

Document Number

**Title** Dipyrromethane compounds and oligomers: the roof and organic light-emitting device using same

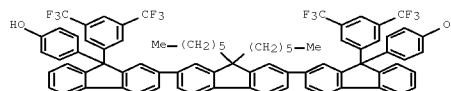
CAS Registry Number  
84922-41-9 COFF-116

Chemical or Trade Name  
Phenol, 4,4'-[9,9'-bis[4-(1,1-dimethylethyl)phenyl]-9,9'-  
dihexyl[2,2':7',2''-ter-9H-fluorene]-9,9'-diyl]bis- (9CI) (CA INDEX  
NAME)



CAS Registry Number  
10045-38-1 000000

Chemical or Trade Name  
Phenol, 4,4'-[3,3'-bis[3,5-bis(trifluoromethyl)phenyl]-9,9'-  
dihydro[2,2':1',2''-ter-9H-fluorene]-9,9'-divinylbis- (CA INDEC NAME)



CAS Registry Number  
88462-24-2 08850

Chemical or Trade Name

Patent Assignee/Corporate Source  
Canon Kabushiki Kaisha, Japan  
Source  
U.S. Pat. Appl. Publ. 43 pp. CODEN: USXXCO

PATENT INFORMATION					
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
US 20050236977	AI	20051027	US 2005-102666	2005041	
JP 2005325097	A	20051124	JP 2005-198186	2005040	
JP 2006000407	B3	2006000406			

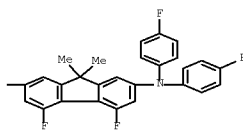
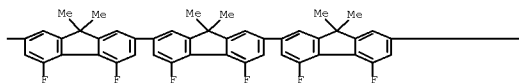
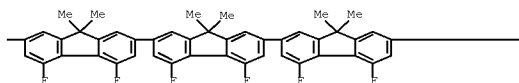
A novel substituted fluorene compound is provided which is represented by the general formula I where the two p-phenylene groups are bonded at positions 1,4 and 4' to the fluorene; R<sub>1</sub>, R<sub>2</sub> = a, g, h, alkyl, aralkyl; R<sub>3</sub>, R<sub>4</sub> = a, g, h, alkyl, aralkyl; R<sub>5</sub>, R<sub>6</sub> = a, g, h, alkyl, aralkyl; a, b = 0, 1, 2; c, d, e, f, g, h = 1, 10. This new, double coupling of 2,2'-bis(4-substituted-fluorene) with 1,4-phenylene and 1,9'-diol followed by Friedel-Crafts alkylation with 1-halogeno-4-alkylbenzene provided the product of formula I where R<sub>1</sub>, R<sub>2</sub>, R<sub>3</sub>, R<sub>4</sub> = a, g, h = 4-alkyl or 4'-alkyl at the p-phenyl C<sub>6</sub> where each p-phenylene is bonded to fluorene at the C<sub>1</sub> or C<sub>4</sub> and a = 11 that exhibited the following electroluminescent device characteristics: at applied voltage of 4V and C<sub>d</sub> of 30.0 mV/cm<sup>2</sup>, the initial luminescence (blue light) of 1000 cd/m<sup>2</sup> deteriorated to 950 cd/m<sup>2</sup> after 100 h, an initial luminescence of 450 cd/m<sup>2</sup> that deteriorated to 200 cd/m<sup>2</sup> after 100 h for a bi-phenyl-substituted spiro fluorene.

CAS Registry Number  
44004-14-1, CAS ID

Chemical or Trade Name  
[2,2':7',2''-Tetr-9H-fluorene]-7,7'-diacids,  
9,9,3',3',9'',3''-hexaethoxy-N7,N7,N7'',N7''-tetrakis(4-methoxyphenyl)-  
(CA INDEX NAME)

CAS Registry Number  
84751-34-6 CATECHOL

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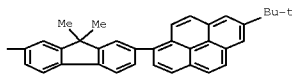
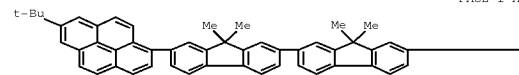


CAS Registry Number

955499-13-2 CASUS

Chemical or Trade Name

Dyrene, 1,1'-[9,9'-bis(9,9'-dimethyl-9H-fluorenyl)]bis(2,2',2''-hexafluoro-1,1'-ethynyl)- (C62) (CA EN06X 3498)



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Accession Number

955499-13-2 CASUS

Document Number

955499-13-2

Title

Novel light-emitting organic materials with variable electron and hole conductivities

Author(s)

Chen, Andrew C.-J.; Wallace, Jason U.; Zeng, Lichang; Wei, Siemon K.-H.; Chen, Shao H.

Patent Assignee/Corporate Source

Department of Chemical Engineering and Laboratory for Laser Electronics, Univ. of Rochester, Rochester, NY, 14620-1212, USA

Source

Proceedings of SPIE-The International Society for Optical Engineering (2005), 59363L; Liquid Crystals, 59363L; CODEN: LQDQDQ, ISSN: 0277-786X

Document Type

Journal

Language

English

Abstract

Symposium proceedings. Novel organic materials are constructed by attaching monodisperse oligofluorenes to a hole- or an electron-conducting core through a flexible spacer. These materials exhibit desirable properties for use in material and supramolecular light-emitting devices, such as the ability to form morphol. stable, dense liquid crystal films and amorphous films with elevated glass transition temps., capability for hole/electron emission, tunability of charge injection and transport, and ultimately achieving superior OLED device efficiency and lifetime.

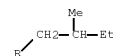
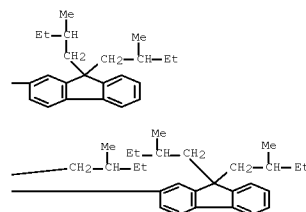
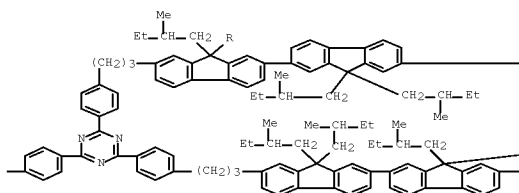
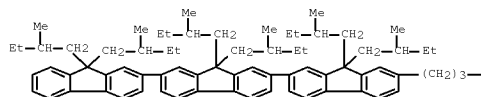
No abstract

CAS Registry Number

955499-13-2 CASUS

Chemical or Trade Name

Dyrene, 1,1'-[9,9'-bis(9,9'-dimethyl-9H-fluorenyl)]bis(2,2',2''-hexafluoro-1,1'-ethynyl)- (C62) (CA EN06X 3498)

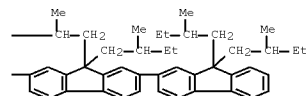
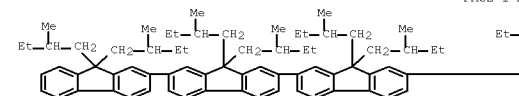


CAS Registry Number

955499-13-2 CASUS

Chemical or Trade Name

Dyrene, 1,1'-[9,9'-bis(9,9'-dimethyl-9H-fluorenyl)]bis(2,2',2''-hexafluoro-1,1'-ethynyl)- (C62) (CA EN06X 3498)

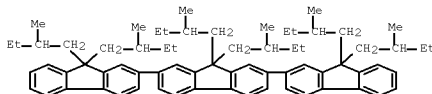


CAS Registry Number

955499-13-2 CASUS

Chemical or Trade Name

Dyrene, 1,1'-[9,9'-bis(9,9'-dimethyl-9H-fluorenyl)]bis(2,2',2''-hexafluoro-1,1'-ethynyl)- (C62) (CA EN06X 3498)



US ANDREWER 14 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN  
 Accession Number  
 2005050495 CAPLUS PubSci  
 Document Number  
 143448402

Title  
 Blue light-emitting materials based on terfluorenes with carbazole terminal units

Author(s)  
 Zhang, G.; Chen, J.; Cheng, Y. X.; Deng, Y. H.; Wang, L. X.; Ma, D. G.; Jing, X. B.; Wang, F. S.

Patent Assignee/Corporate Source

State Key Laboratory of Polymer Physics and Chemistry, Changchun Institute of Applied Chemistry, Chinese Academy of Sciences, Changchun, 130022, Peop. Rep. China

Source  
 Synthetic Metals (2005), 152(1-3), 229-232. CODEN: SYMSED; ISSN: 0167-4870

Document Type

Journal

English

Abstract

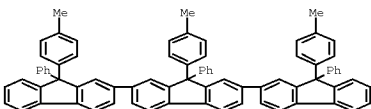
These thermally stable bis(9,9-dialkylfluorenyl)s with hole-transporting carbazole moieties at two terminals (DCTFs) have been synthesized by modified Ullmann reaction and Pd-catalyzed Suzuki coupling. The resulting compounds are amorphous with glass transition temperature (T<sub>g</sub>) in the range of 220-235 °C. The electrochromic efficiency up to 1.8 opta has been achieved with the device structure of ITO/NPB (50 nm)/DCTF (300 nm)/BCP (20 nm)/Ag (20 nm)/ITO. A 60% increase of efficiency along with the CIE coordinates of (0.16, 0.11) have demonstrated compared with terfluorene (TF) analogized device.

HS Structure

CAS Registry Number

691646-13-7 CAS015

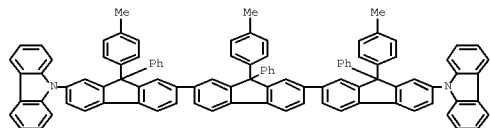
Chemical or Trade Name  
 2,2'-(7,7'-bis(9H-fluorenyl)-9,9'-biphenyl-4,4'-diylbis(4-methylphenyl))-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl) (EC) (CA INDEX NAME)



CAS Registry Number

691646-13-7 CAS015

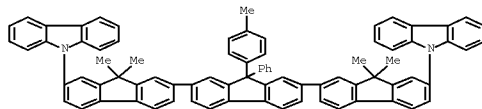
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CAS Registry Number

691646-13-7 CAS015

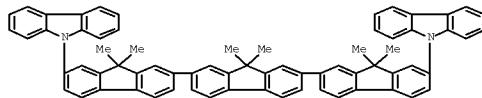
Chemical or Trade Name  
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CAS Registry Number

691646-13-7 CAS015

Chemical or Trade Name  
 9H-Carbazole, 9,9'-(9,9'-biphenyl-4,4'-diylbis(4-methylphenyl))-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl)-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl) (EC) (CA INDEX NAME)



DE CITING REF CONF: 6 THREE ARE 4 CAPLUS RECORDS THAT CITE THIS RECORD (4 CITED)

US ANDREWER 15 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number  
 2005050495 CAPLUS PubSci

Document Number  
 143178402

Title  
 Preparation and application of amine compounds having fluorene group as framework

Author(s)  
 Kishikawa, Masahiko; Matsumoto, Naoki; Eguchi, Hiroyuki

Patent Assignee/Corporate Source  
 Toshiba Corporation, Japan

Source  
 PCT Int. Appl., No. pp. CODEN: PFIYD2

Document Type

Patent

Language

Japanese

Patent information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005050495	A1	20050729	WO 2005-29787	20050614
JP 2006050205	A	20060615	JP 2005-2475	20050514
EP 1752440	A1	20070214	EP 2005-70365	20050514
US 20060194676	A1	20060814	US 2006-68945	20060711
US 7462369	B2	20060127		

Abstract

The invention relates to a novel amine compound utilisable as a hole-transporting or hole-injecting material in organic electroluminescent elements, electrophoretic photo-scopes, etc. The novel amine compound is represented by the formula: wherein R1 and R2 each independently represents hydrogen (H), alkyl, substituted or unsubstituted aryl, aryl, alkyl, or halogen; Ar1, Ar2 and Ar3 each independently represents unsubstituted aryl or heteroaryl (provided that each Ar1 may be bonded to the corresponding Ar2 to form a ring system heterocycle in cooperation with the nitrogen atom bonded thereto); Ar4 each independently represents unsubstituted Ph, phenyl, biphenyl, triphenyl, allyl, fluorenyl, or pyridyl (provided that those substituted by amino are excluded); and M represents a single bond, arylene, or heteroarylene.

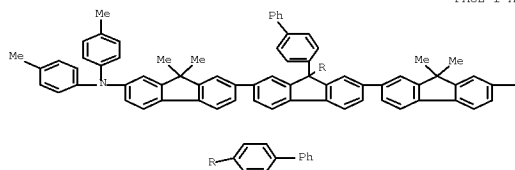
HS Structure

CAS Registry Number

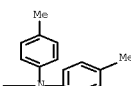
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Chemical or Trade Name  
 1,2,7,8-tetra-9H-fluorenyl-9,9'-biphenyl-4,4'-diylbis(4-methylphenyl)-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl)-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl) (EC) (CA INDEX NAME)

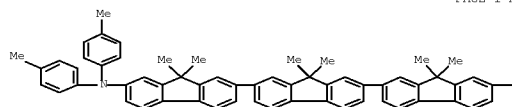
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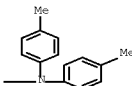
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PAGE 1-A



PAGE 1-B



DE CITING REF CONF: 7 THREE ARE 3 CAPLUS RECORDS THAT CITE THIS RECORD (3 CITED)

US ANDREWER 16 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number  
 2005050495 CAPLUS PubSci

Document Number  
 14326447

Title  
 Light-emitting material for organic electroluminescent devices

Author(s)  
 Kishikawa, Masahiko; Furutachi, Masahiko; Hosokawa, Chieko

Patent Assignee/Corporate Source  
 Sumitomo Electric Co., Ltd., Japan

Source  
 PCT Int. Appl., 71 pp. CODEN: PFIYD2

Document Type

Patent

Language

Japanese

Patent information

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005050495	A1	20050729	WO 2005-29787	20050614
EP 1686015	A1	20060630	EP 2004-60721	20041213
CN 1614363	A	20070214	CN 2004-40041655	20041213
KR 2006119564	A	20061103	KR 2006-712159	20060819
IN 20060402202	A	20070408	IN 2006-042202	20060819
US 20070152683	A1	20070705	US 2006-562884	20060819
JP 20060291271	A	20061304	JP 2006-181142	20060714
JP 2006010408	A	20060115	JP 2006-212714	20060621

Abstract

Disclosed is a light-emitting material for organic electroluminescent (EL) devices which is composed of an aryl- anthracene derivative of a specific structure. Also disclosed are a material for organic EL devices and an organic EL device where an organic thin film layer composed of one or more layers including at least a light-emitting layer is sandwiched between a cathode and an anode. At least one layer of the organic thin film layer contains the material for organic EL devices by itself or as a component of a mixture. Consequently, the organic EL device has a high luminous efficiency and a long life. Also disclosed are a light-emitting material for organic EL devices and material for organic EL devices which enable to realize such an organic EL device.

HS Structure

CAS Registry Number

691646-13-7 CAS015

Chemical or Trade Name  
 1,2,7,8-tetra-9H-fluorenyl-9,9'-biphenyl-4,4'-diylbis(4-methylphenyl)-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl)-9,9'-biphenyl-1,1'-diylbis(4-methylphenyl) (EC) (CA INDEX NAME)









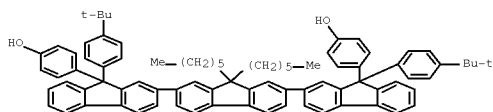
US ANSWER 20 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN  
Accession Number: 20050888 CAPLUS Fulltext  
Document Number: 142358044

Title: Telechelic emissive oligomers and polymers derived therefrom  
Author(s): Cella, James A.  
Follett, Andrew;Corporate Source: USA  
Source: U.S. Pat. Appl. Publ., 14pp. CODEN: USXXCO  
Document Type: Patent  
Language: English  
Follett, Andrew

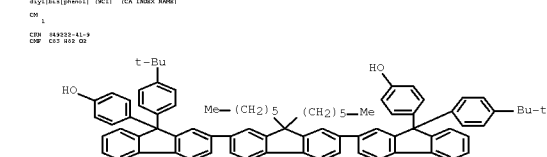
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 2005078479	A1	20050607	US 2003-090470	20030107
WO 2005075616	A1	20050607	WO 2004-093064	20040109
EP 1679403	A1	20040609	EP 2004-794015	20040106
EP 1679403	B1	20090329		
CN 1680267	A	20070102	CN 2004-80036219	20040106
AT 420264	T	20100115	AT 2004-794015	20040106
JP 2005059268	A1	20051117	JP 2005-170423	20050629
US 7603136	B2	20100130		
KR 201027	B1	20080306	KR 2006-706031	20060302

Abstract: The present invention is directed to telechelic emissive, semiconductive and functionalized oligomers which can be polymerized by a variety of conventional techniques to afford emissive polymers. The polymers are useful as active layers in light emitting as well as photovoltaic devices.

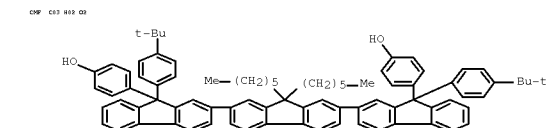
CAS Registry Number: 149320-41-9 CAPLUS  
Chemical or Trade Name: Phenol, 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis- (MCI) (CA INDEX NAME)



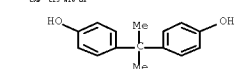
CAS Registry Number: 149320-42-0 CAPLUS  
Chemical or Trade Name: Carbonic dichloride, polymer with 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis(phenol) (MCI) (CA INDEX NAME)



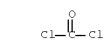
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CMP C C13 D



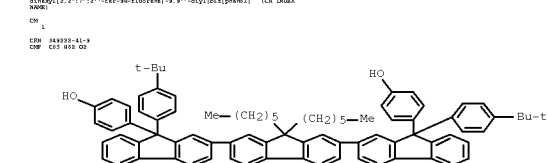
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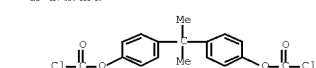
CM 3  
CFM 15-44-5  
CMP C C13 D



CAS Registry Number: 149320-44-4 CAPLUS  
Chemical or Trade Name: Carbonic dichloride, polymer with 4,4'-(1-methylthiophenylidene)-4,1-phenylene) ether, polymer with 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis(phenol) (MCI) (CA INDEX NAME)



CM 2  
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CMP C17 614 C13 GA

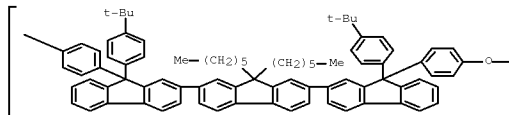


CAS Registry Number: 149320-47-5 CAPLUS  
Chemical or Trade Name: Poly(aryleneethynylene)-1,4-phenylene[9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl]-1,4-phenylene) (MCI) (CA INDEX NAME)

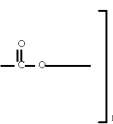


CAS Registry Number: 149320-43-1 CAPLUS

Chemical or Trade Name: Poly(aryleneethynylene)-1,4-phenylene[9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl]-1,4-phenylene) (MCI) (CA INDEX NAME)



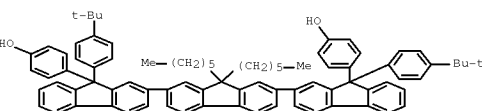
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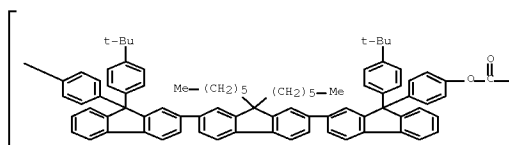
CAS Registry Number: 149320-44-1 CAPLUS  
Chemical or Trade Name: Phenol, 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis- (MCI) (CA INDEX NAME)

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CFM 149320-44-9  
CMP C17 602 G2

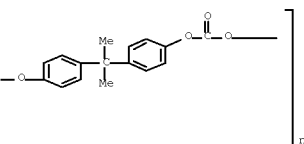


CAS Registry Number: 149320-45-5 CAPLUS  
Chemical or Trade Name: Carbonic dichloride, polymer with 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis(phenol) and 4,4'-(1-methylthiophenylidene)bis(phenol) (MCI) (CA INDEX NAME)

CM 1  
CFM 149320-46-9



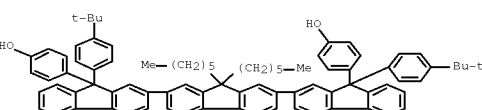
PAGE 1-A



PAGE 1-B

CAS Registry Number: 149320-46-9 CAPLUS  
Chemical or Trade Name: Phenol, 4,4'-(1,9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl)bis- (MCI) (CA INDEX NAME)

CM 1  
CFM 149320-46-9  
CMP C17 602 G2



CM 3  
CFM 10-10-4  
CMP C12 610 C13 BL



CAS Registry Number: 149320-48-7 CAPLUS  
Chemical or Trade Name: Poly(aryleneethynylene)-1,4-phenylene[9,9'-bis(4-(1,1-dimethylthiophenyl)-9',9'-dihydro[1,2,7:7',2']-bicyclo-octene)-9,9'-diyl]-1,4-phenylene) (MCI) (CA INDEX NAME)

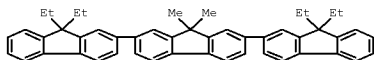


Title: Organic electroluminescent device with fluorene compound  
Author(s): Takeda, Yoshiaki; Chikamasa, Takahiko; Tanabe, Yoshihiro; Tsukada, Hirotaka  
Patent Assignee/Capable Source: Minus Chemicals Inc., Japan  
Source: Jpn. Kokai Tokkyo Koho, K7 pp. CODEN J033AF  
Document Type: Patent  
Language: Japanese

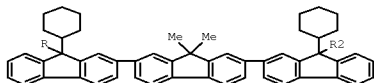
Patent Information				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2004077345	A	20041007	JP 2003-73209	20030314
JP 4261040	B2	20080313		

Abstract  
The invention refers to an electroluminescent device comprising a fluorene compound I (R1-R = substituents which may join together to form rings, n1-n6 = 1-5, A,B = straight chain branched or cyclic alkyl (unsubstituted or substituted) and A=2, n=1,2)  
HO Structure

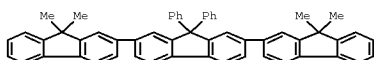
CAS Registry Number: 765390-01-0 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-ethylphenyl)- (KCI) (CA INDEX NAME)



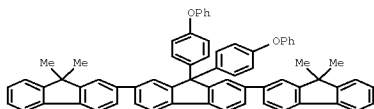
CAS Registry Number: 765390-09-2 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



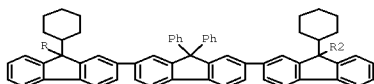
CAS Registry Number: 765390-10-3 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



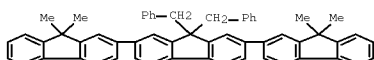
CAS Registry Number: 765390-10-3 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



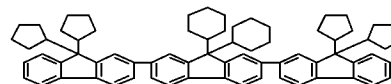
CAS Registry Number: 765390-16-1 CAPLUS  
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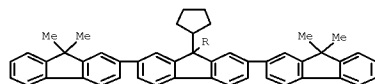
CAS Registry Number: 765390-17-0 CAPLUS  
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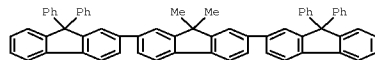
CAS Registry Number: 765390-18-2 CAPLUS  
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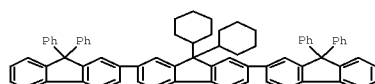
CAS Registry Number: 765390-13-0 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



CAS Registry Number: 765390-12-7 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)

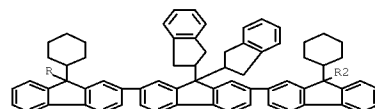


CAS Registry Number: 765390-13-0 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



CAS Registry Number: 765390-14-0 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)

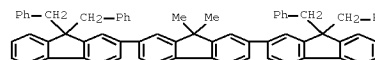
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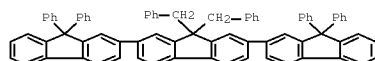
PAGE 2-A



CAS Registry Number: 765390-18-2 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



CAS Registry Number: 765390-09-2 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)

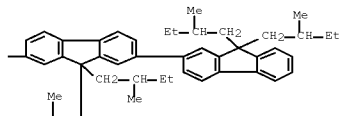
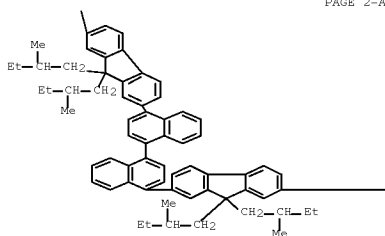


CAS Registry Number: 765390-01-0 CAPLUS  
Chemical or Trade Name: 2,2'-(2,2'-Diphenyl-9,9'-bifluorene-9,9'-diyl)-9,9'-bis(4-methylphenyl)- (KCI) (CA INDEX NAME)



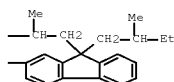
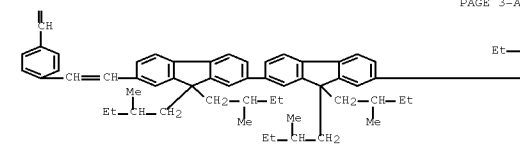
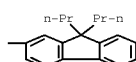
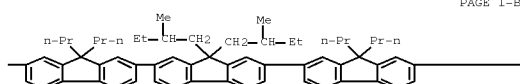
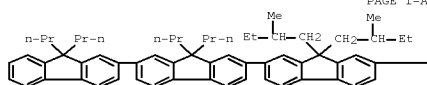




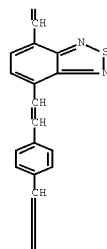
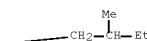
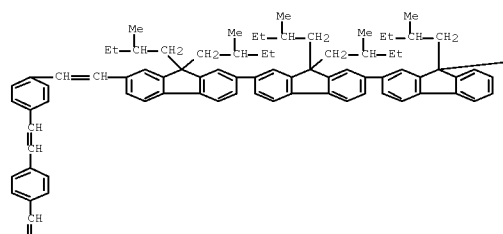


CAS Registry Number  
73505-03-3 CAPUS

Chemical or Trade Name  
2,2',7,7'-Tetrakis-fluorene, 9,9'-(2,1,3-benzoxathiazole-4,5-diylbis(2,1-ethenediyl)-4,1-phenylene-2,1-ethenediyl)-4,1-phenylene-2,1-ethenediylbis(9,9',9',9'-henzenic(2-methylbutyl)- (HCl) (CA INDEX NAME)

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OS.CITING REF COUNT: 46 THERE ARE 46 CAPUS RECORDS THAT CITE THIS RECORD (46 CITINGS)

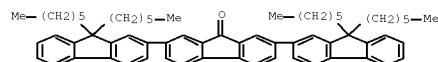


LA ANDERSON 36 OFF77 CAPLUS: COPYRIGHT 2019 ACS on ETN  
Accession Number  
2019-14877 CAPLUS: Fulltext  
Document Number  
H1-124279  
Title  
Fluorene-Containing Polyfluorenes and Oligofluorenes: Photophysics, Origin of the Green Emission and Efficient Green Electroluminescence  
Author(s)  
Jukanti, Anshika P.; Xing, Xiangping; James, Jarrett A.  
Parent Report/Corporate Source  
Department of Chemical Engineering and Department of Chemistry, University of Washington, Seattle, WA, 98195-7050, USA  
Source  
Journal of Physical Chemistry B (JPCA), 19(23), 6658-6701 CODEN: JPCBFX, ISSN: 1520-1061  
Document Type  
Journal  
Language  
English

CAS Registry Number  
70185-83-5 CARLOS

Chemical or Trade Name  
[2,2':1',2''-Tax-9H-fluoren-9'-one, 9,9,9'',9''-tetrabenzyl- (XCI) (C

(INDEX NAME)



OS.CITING REF COUNT: 157 THERE ARE 157 EARLY RECORDS THAT CITE THIS RECORD (159 CITINGS)

LA ANDERSON 20 OFF TIPS CAPLUS COPYRIGHT 2010 ACS ON STN  
Accession Number 2004-010003 CAPLUS PubNo1  
Document Number 1402-011136  
Title Thermally crosslinkable materials based on boronic acid derivatives and their preparation and multilayered structures and devices produced using them  
Author(s) Li, Yanning; Ding, Jianyi; Dai, Michael; Tan, Ye; D'Amico, Mario  
Parent Publication Corporate and/or  
National Research Council of Canada, Can.  
Source RCT-Inf. Appl., 80 pp. CODEN: FPIX02  
Document Type Patent  
Language English  
Natural Language

**Abstract**  
Crosslinkable compounds of boron or boronic acid derivative, such as a boronate, and an organic or organometallic moiety having a functionality, such as hole transporting, electron transporting, and light emitting, are described, as well as methods of forming the cross-linked materials. Multilayered materials and optoelectronic devices (e.g., electroluminescent devices) including such cross-linked composites are also disclosed.

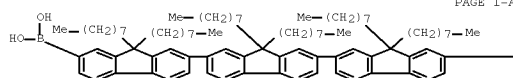
CAS Registry Number  
64474-62-6 CAPUS

Chemical or Trade Name  
Benzoic acid, B, 2', 3', 4', 5', 6'-hexamethyl-2, 3', 4', 5', 6'-hexa-9H-fluorene-1, 2, 3-trimethylbis-, homopolymer (CA INDEX NAME)

CHE  
1

CEN 64474-56-0  
CNE 644 013-03 CM

Chemical or Trade Name  
Benzoic acid, D,D'-(9,9',9'',9'''-hexaethoxy[2,2':2'',2'''-ter-9H-fluorene]-7,7'-diyl)bis-, homopolymer (CA INDEX NAME)  
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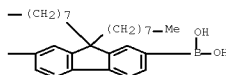
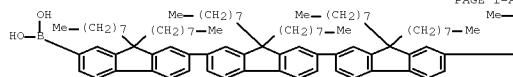


CAS Registry Number  
646474-80-7 CASQ75

Chemical or Trade Name  
Isocrotonic acid, B<sup>B</sup>(9; 9, 9'; 9', 9''; 9'', 9''' ; 9''', 9'''';  
oAcetyl[2,2',2'': 2'', 2''': 2''', 2'''';-quater-9B-fluorene]-7, 7'''-diyl[bis(homo)polymer] (CA INDEX NAME)

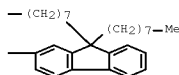
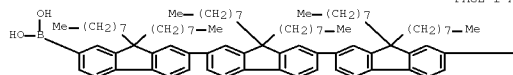
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EPA 646474-80-4  
CDE C16 H16A DR CM



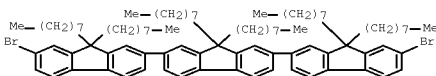
CAS Registry Number  
616174-56-0 CAPUIS

Chemical or Trade Name  
Succinic acid, 5,5'-(9,9,9',9',9'',9''-hexaoctyl[2,2':2'',2''-bis-9H-fluorene]-7,7'-diyl)bis- (CA INDEX NAME)

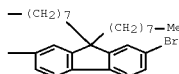
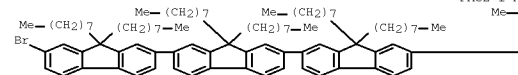


CAS Registry Number  
646474-54-6 CAPUS

Chemical or Trade Name  
2,3',7',2''-Tet-3H-fluorene, 7,7''-dibromo-9,9,9',9'',9''',9'''-hexamethyl-  
(CA INDEX NAME)

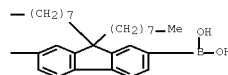
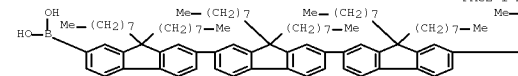


Chemical or Trade Name  
2,2',7,7'-tetrakis(2,2',3,3'-quater-9H-fluorene,  
7,7'-dilicene-9,9',9',9',9',9'-octactyl- (MCI) (CA INDEX



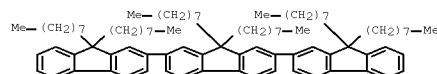
CAS Registry Number  
646474-60-4 CASUS

Chemical or Trade Name  
Succinic acid, D,L-2,3,9,9',9'',9''',9''''-  
octamethyl[3,2',2'',2''',2''''-quater-88-Eloctene]-7,2''''-diylbis- (C



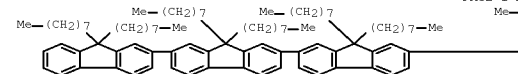
CAS Registry Number  
260702-01-2 CAPLUS

Chemical or Trade Name  
2,2',7',7''-Tet-9H-fluorens, 9,9,9',9'',9''',9'''-hexaethyl- (9CI) (CA INDEXED)



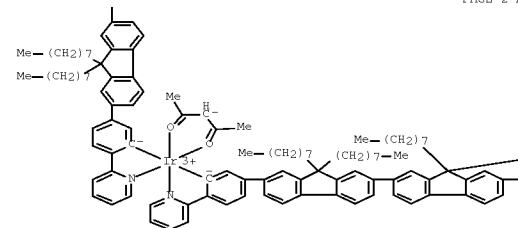
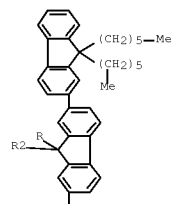
CAS Registry Number  
474253-22-7 CASPLUS

Chemical or Trade Name  
2,2',7',2''-Quater-9H-fluorene,  
9,9',9'',9'''-octaoctyl- (CA INDEX NAME)

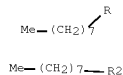
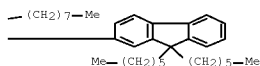


CAS Registry Number  
620425-13-0 CARFUS

Chemical or Trade Name  
Iridium, bis[5-(9<sup>H</sup>, 9<sup>H</sup>-dihexyl-9, 9<sup>H</sup>-tetracocetyl[2, 2':7', 2'':ter-9H-fluorenyl-7-yli-2-[2-pyridinyl-n(phenyl)-n[2, 4-pentenedionol-10-yd)]-2-(C1) (CA INDEX NAME)

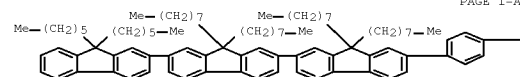






CAS Registry Number  
69662-09-4 CAPUS

Chemical or Trade Name  
Pyridine, 2-[1-(9',9''-dihexyl-8,9,9'-bicyanovinyl)2,2':7,2''-bis-9H-fluorenyl]- (KCI) (CA INDEX NAME)



OR CITING REF CONT: 159 THERE ARE NO CAS RECORDS THAT CITE THIS RECORD (ISA CITEERR)

LE ANDREWER 41 OF 77: CAPUS COPYRIGHT 2010 ACS on STN  
Accession Number: 350648070 CAPUS [Fulltext](#)  
Download Number: 14371948

Title: Synthesis and Properties of Random and Alternating Fluorene-Carbazole Copolymers for Use in Blue Light-Emitting Devices.

Author(s): Li, Yuning; Ding, Jianli; Dai, Michael; Tao, Ye Lu; Jiangping, Doro; Nale, Fabien

Patent Assignee/Copyside Source: Institute for Chemical Process and Environmental Technology (ICPET) and Institute for Microstructural Sciences (IMS), National Research Council of Canada (NRC), Ottawa, ON, K1A 0P6, Can.

Source: Chemistry of Materials (2004), 16(1), 2165-2173 CODEN: CMAFEB; ISSN: 0887-624X

Document Type: Journal

Language: English

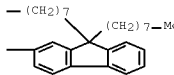
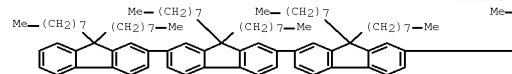
Abstract:

Random and alternating fluorene-carbazole (FCZ) copolymers with various carbazole contents (20-90 mol %) have been designed and synthesized for use as the hole-transporting as well as light-emitting layer in blue light-emitting diodes (LEDs). DSC and TGA have indicated the complete suppression of the oxidizability of these polymers by the introduction of 3,6-carbazole moieties into the polymer backbone, which also results in changes in the thermal stability. The photophysical properties have been studied and the results have been influenced by the sequence distribution of the fluorene segments, as well as the carbazole content. The emission maxima and electronic features of the alternating copolymers have changed with carbazole content, reflecting the difference in the electronic distribution of the repeat units. However, in the case of the random copolymers, the emission spectra remain almost unchanged and are similar to poly(9,9'-dioctylfluorene) (PPV). Besides the fact that the carbazole content increases up to 33 mol %, this feature has been attributed to the existence of longer fluorene segments in the random copolymers, which would be expected to have lower energy gaps, and thus, effective cooled emission from other parts of the polymer backbone. Consequently, the light emitted from these energy gaps is similar to that from PPV. Electrochem. studies indicate that the introduction of carbazole units effectively raises the HOMO energy levels, thereby facilitating hole injection. Controlling the carbazole content between 25 and 33 mol % results in copolymers with stable and reversible p-doping and n-doping processes. A test for a LED device from PFT-400 indicates that the FCZ copolymers could be a good candidate for blue light-emitting and hole-transport materials.

HF Structure:

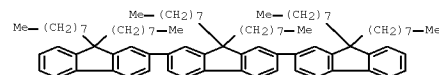
CAS Registry Number:  
478202-27-7 CAPUS

Chemical or Trade Name:  
2,2':7,2''-Bis[2,2'-(9H-fluorene-9,9'-diyl)-5,5'-di-9H-carbazole] (KCI) (CA INDEX NAME)



CAS Registry Number:  
261325-02-2 CAPUS

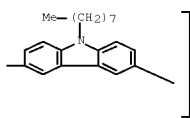
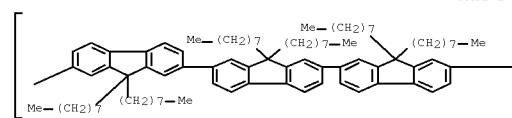
Chemical or Trade Name:  
2,2':7,2''-Bis[2,2'-(9H-fluorene-9,9'-diyl)-5,5'-di-9H-carbazole] (KCI) (CA INDEX NAME)



CAS Registry Number:  
46474-54-4 CAPUS

Chemical or Trade Name:  
2,2':7,2''-Bis[2,2'-(9H-fluorene-9,9'-diyl)-5,5'-di-9H-carbazole] (KCI) (CA INDEX NAME)

Poly[2,2'-(9H-fluorene-9,9'-diyl)-5,5'-bis[2,2'-(9H-fluorene-9,9'-diyl)-5,5'-di-9H-carbazole] (KCI) (CA INDEX NAME)

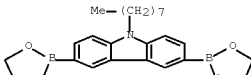


CAS Registry Number:  
711613-32-4 CAPUS

Chemical or Trade Name:  
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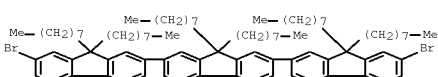
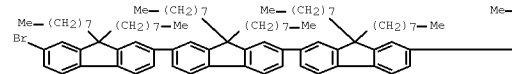
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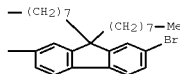
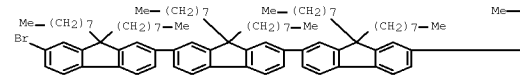
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CDN 464616-04-1  
CDP 4116 410 30 M 04



CAS Registry Number  
44474-54-4 CAPUS

Chemical or Trade Name:  
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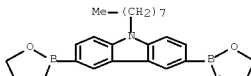


CAS Registry Number  
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Chemical or Trade Name:  
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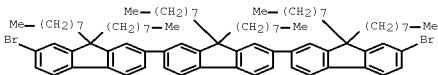
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CDP 424 401 30 M 04



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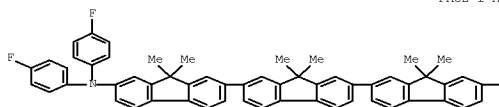
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Chemical or Trade Name:

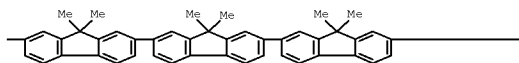




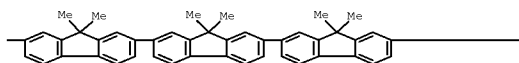
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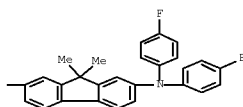
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PAGE 1-C



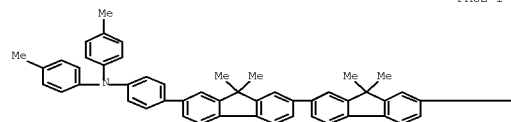
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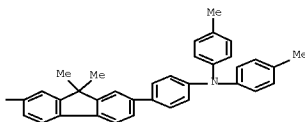
CAS Registry Number  
66904-26-6 CASUS

Chemical or Trade Name  
Bisbenzimidazole, 4,4'-(2,6,8,8'-tetramethyl-9,9'-biphenyl-2,2'-diyl)-bis-  
fluorene-2,7'-diylbis[4,4'-biphenyl-2-yl] (KCI) (CA INDEX NAME)

PAGE 1-A



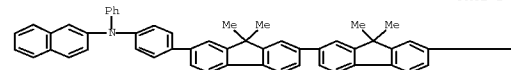
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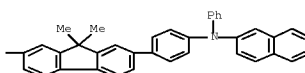
CAS Registry Number  
66904-27-7 CASUS

Chemical or Trade Name  
2-Naphthylfluorene, N,N'-bis[4,4'-(2,6,8,8'-tetramethyl-9,9'-biphenyl-2,2'-diyl)-4,1-phenylene]bis[4-phenyl]- (KCI) (CA INDEX NAME)

PAGE 1-A



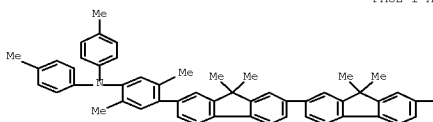
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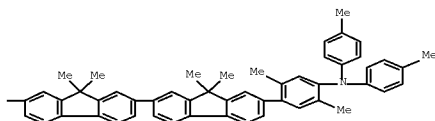
CAS Registry Number  
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Chemical or Trade Name  
Bisbenzimidazole, 4,4'-(2,6,8,8'-tetramethyl-9,9'-biphenyl-2,2'-diyl)-bis-  
fluorene-2,7'-diylbis[4,4'-biphenyl-2-yl] (KCI) (CA INDEX NAME)

PAGE 1-A



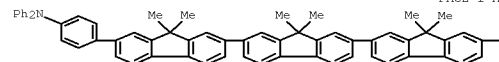
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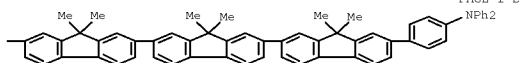
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Chemical or Trade Name  
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PAGE 1-A



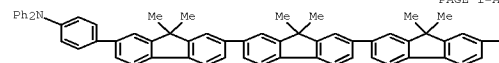
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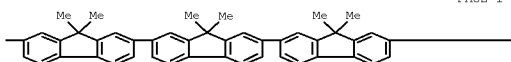
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fluorene-2,7'-diylbis[4,4'-biphenyl-2-yl] (KCI) (CA INDEX NAME)

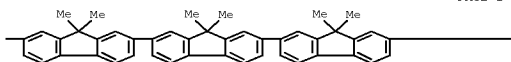
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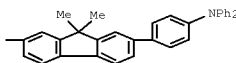
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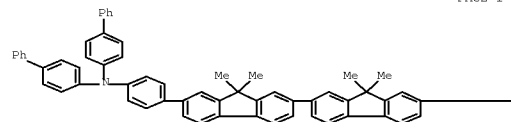
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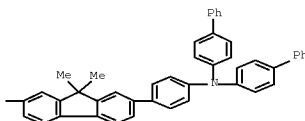
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66904-31-0 CASUS

Chemical or Trade Name  
Bisbenzimidazole, 4,4'-(2,6,8,8'-tetramethyl-9,9'-biphenyl-2,2'-diyl)-bis-  
fluorene-2,7'-diylbis[4,4'-biphenyl-2-yl] (KCI) (CA INDEX NAME)

PAGE 1-A

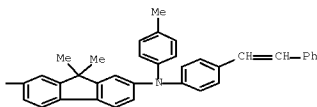
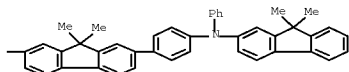
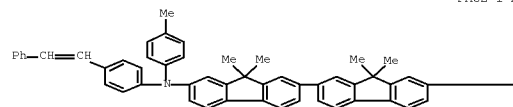
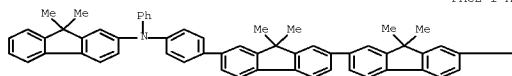


PAGE 1-B



CAS Registry Number  
66904-32-1 CASUS

Chemical or Trade Name  
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fluorene-2,7'-diylbis[4,4'-biphenyl-2-yl] (KCI) (CA INDEX NAME)



US CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS RECORD (9 CITED RECORDS)

LIJ ANDREWS 48 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number: 2004202784 CAPLUS Publist  
Document Number: 140254002

Title:

Fluorene dyes and organic electroluminescent devices using them

Author(s): Suzuki, Naoki; Hatake, Masaru; Sano, Akio; Yamada, Naoki; Nishikawa, Chikao; Oishi, Akio; Tanaka, Tatsuo; Yashiro, Eiji

Patent Assignee/Corporate Source: Canon Information Systems, Japan

Source: PCT Int. Appl., 47 pp. COBEN: P03022

Document Type: Patent

Language: English

Patent Information:

PATENT NO.	IND.	DATE	APPLICATION NO.	DATE
WO 2004020772	AL	20040321	WO 2003-261029	20030912
JP 2004032451	A	20040318	JP 2002-248647	20020927
JP 20030609	B2	20030411		
KF 2003033448	AL	20040318	KF 2003-257640	20030912
CW 2003033448	AL	20040318	CW 2003-003333	20030912
CN 1280065	C	20040310		
KP 1130069	AL	20050525	KP 2003-791209	20030912
TR 2004025389	AL	20040318	TR 2004-491745	20040406
US 7241513	B2	20070710		
KR 200701621	B1	20071004	KR 2006-709122	20060224
JP 2007063285	A	20070915	JP 2006-287210	20060225
JP 4063052	B2	20080326		

Abstract: Fluorene dyes (1, 4), (2) optionally substituted polyarylether compound, R<sup>1</sup>, R<sup>2</sup> = H, organic group, substituted amino, CN, halogen, s = 1-10) are disclosed which are used to provide organic electroluminescent devices. Such devices have an optical output exhibiting a high luminance with an extremely high efficiency, and have extremely high stability. In an example, 2,2'-di(methyl-9,9'-fluorenyl)ethane was condensed (1) with 1,1'-phenylene diisocyanate to give a fluorescent dye.

HO Sheet 1

CAS Registry Number: 407739-71-0 CAPLUS

Chemical or Trade Name:

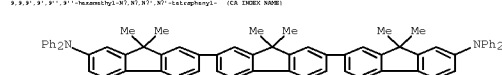
[1,3,3',3'-Tetra-9H-fluorene]-7,7'-diamine,  
R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-(2-phenylphenyl)phenyl)- (KE1) (CA INDEX NAME)

CAS Registry Number:

407739-71-0 CAPLUS

Chemical or Trade Name:

[1,3,3',3'-Tetra-9H-fluorene]-7,7'-diamine,  
R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-phenyl)- (CA INDEX NAME)

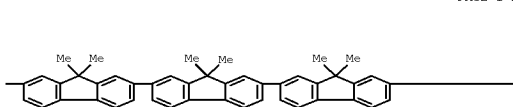
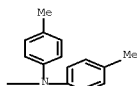
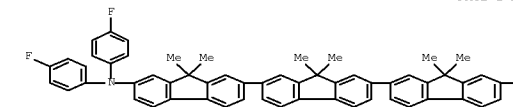
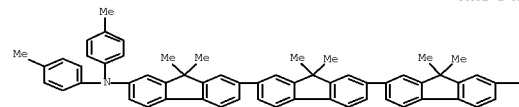


CAS Registry Number:

407739-71-0 CAPLUS

Chemical or Trade Name:

[1,3,3',3'-Tetra-9H-fluorene]-7,7'-diamine,  
R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-methylphenyl)- (CA INDEX NAME)

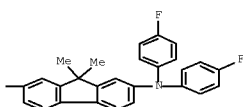
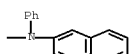
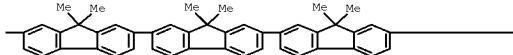
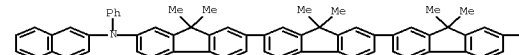


CAS Registry Number:

407739-71-0 CAPLUS

Chemical or Trade Name:

[1,3,3',3'-Tetra-9H-fluorene]-7,7'-diamine,  
R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-phenyl)- (CA INDEX NAME)



CAS Registry Number:

407739-71-0 CAPLUS

Chemical or Trade Name:

[1,3,3',3'-Tetra-9H-fluorene]-7,7'-diamine,  
R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-phenyl)- (CA INDEX NAME)

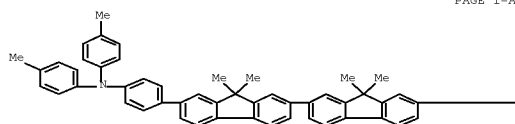
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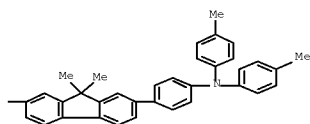
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R<sup>1</sup>, R<sup>2</sup> = H, 9,9'-bis(methyl-9H-fluorenyl)-9,9'-bis(4-phenyl)- (CA INDEX NAME)

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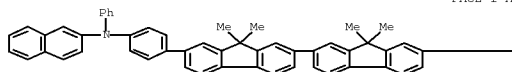


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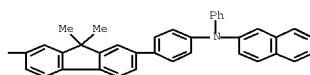


CAS Registry Number  
69364-21-3 CASUS  
Chemical or Trade Name  
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PAGE 1-A

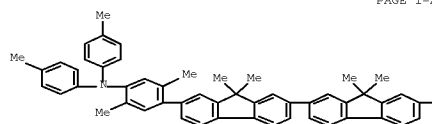


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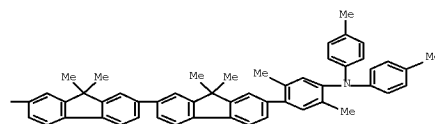


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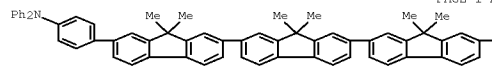


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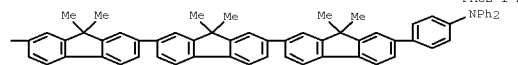


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Chemical or Trade Name  
2,2',5,5'-tetramethyl-4,4'-bis(phenyl)-1,1'-biphenyl ether (CET) (CA INDEX NAME)

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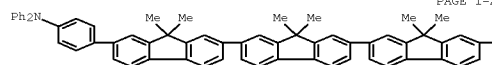


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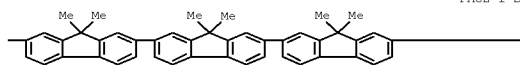


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Chemical or Trade Name  
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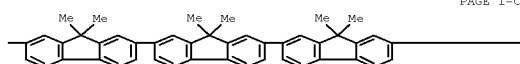
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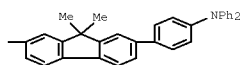
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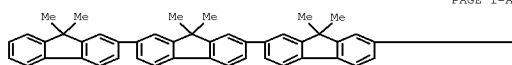


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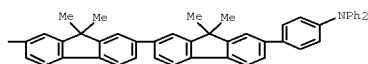


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69364-21-3 CASUS  
Chemical or Trade Name  
2,2',5,5'-tetramethyl-4,4'-bis(phenyl)-1,1'-biphenyl ether (CET) (CA INDEX NAME)

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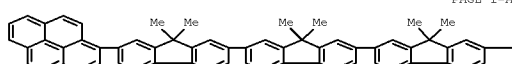


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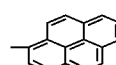


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Chemical or Trade Name  
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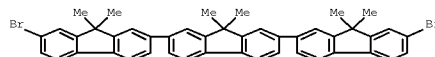
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CAS Registry Number  
69364-21-3 CASUS  
Chemical or Trade Name  
2,2',5,5'-tetramethyl-4,4'-bis(phenyl)-1,1'-biphenyl ether (CET) (CA INDEX NAME)



ON CITING REF COMPI: 11 THERE ARE 11 CASUS RECORDS THAT CITE THIS RECORD IN CITATION

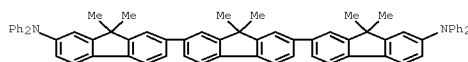
Title	140261171
Author/inventor	Conducted polycyclic compounds and organic light-emitting device using the same
Author/inventor	Suzuki, Koichi; Kawai, Takahiro; Senoo, AKINO; Yamada, Naoki; Saito, Akihiko; Ogasawa, Makoto
Patent Assignee/Corporate Source	Patent Assignee/Corporate Source
Source	Cannon Kabushiki Kaisha, Japan
	PCT Int. Appl., 77 pp. COBEN: PH0002
Document Type	Patent
Language	English
Product Information	

Patent Information					
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE	
WO 200402037L	A1	2004.03.11	WO 2003-201073	2003.06.26	
JP 2004.07326	A	2004.04.09	JP 2003-291191	2003.09.11	
AT 200325605	A1	2004.03.19	AT 2003-25605	2003.06.26	
US 2005023697A	A1	2005.02.07	US 2005-522947	2005.02.02	
US 2003.0721	B2	2003.03.04			

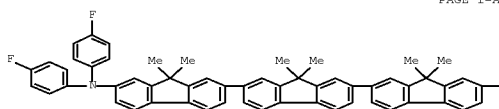
The invention is directed to the preparation of condensed polycyclic compounds. [An (component) of organic light-emitting devices that are extremely efficient in a light output with high luminance and is extremely durable (R1 = H, halo, cyano, substituted amino or (un)substituted alkyl, aralkyl, aryl, Ar1 to Ar5 = independently (un)substituted condensed polycyclic aromatic group or condensed polycyclic heterocyclic group). For example, Suzuki coupling of naphthobenzene with 9,9-dimethylfluorene-2-boronic acid gave 42% II and 17% all substituted 9,9-dimethylfluorenyl II. A device fabricated using II in the active layer exhibited blue emission with a luminance of 2800 cd/m<sup>2</sup> at 10.0 V and 10 mA/cm<sup>2</sup>.]

CAS Registry Number

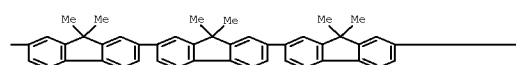
Chemical or Trade Name  
[2,2':7',2'':Ter-9H-fluorene]-2,7'':dimine,  
2,2',2'',2''',2''':hexamethyl-1-N7,N7',N7'',N7'''-tetraphenyl- (CA INDEX NAME)

CAS Registry Number  
8000-12-2, 8000-12-3

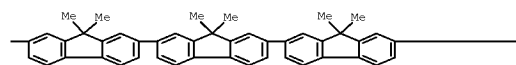
**Chemical or Trade Name**  
[2,2':7,2''-bis(2,2'',2'''-(9,9'-fluorene)-2,2'-diylidene)-N,N,N',N'-tetraakis(4-fluorophenyl)-  
9,9',9'',9'''-tetracarboxylic diimide]-N,N'-bis(4-fluorophenyl)-N,N'-bis(4-chlorophenyl)-N,N'-bis(4-methoxyphenyl)-  
(PCI) (CA INDEX NAME)



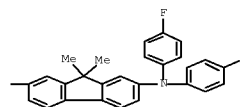
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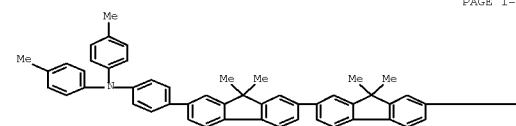
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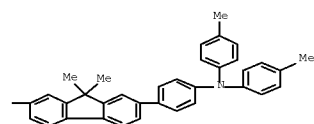
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CAS Registry Number  
100000-00-0

Chemical or Trade Name  
Benzenamine, 4,4'-(9,9',9'',9''',9''',9'''-hexamethyl[2,2':7',2'':9,9'-fluorene]-7,7'-diyl)bis[N,N-bis(4-methylphenyl)- (9CI) (CA INDEX NAME

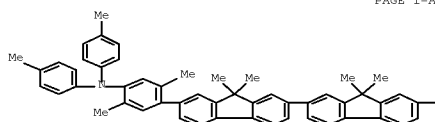


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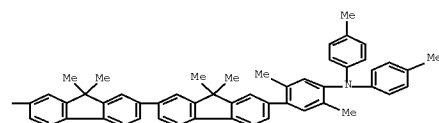


CAS Registry Number

Chemical or Trade Name  
Benzonitrile, 4,4'-(9,9,9',9',9'',9'',9''',9''''-  
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dimethyl-8-N-bis(4-methylphenyl)-1,3,5-triazole] (CA INDEX NAME)

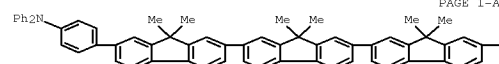


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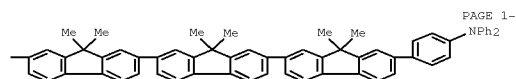


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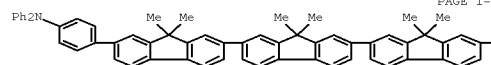
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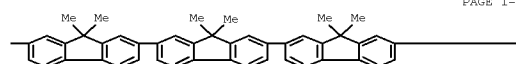
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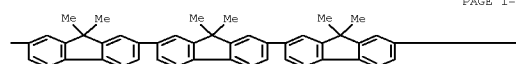
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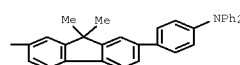
PAGE 1-A



PAGE 1-B



PAGE 1-C



PAGE 1-D

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 Accession Number  
 2006-120026 CARLUS, R. David

Title	Pure Deep Blue Light-Emitting Diodes from Alternating Fluorene-Catecholic Copolymers by Using Soluble Hole-Blocking Materials
Author(s)	Lu, Jangping; Tao, Yu; Drobek, Mike; Li, Yunhui; Ding, Jiafu; Dai, Michael
Parent Program/Corporate Source	Department of Chemical Engineering and Institute for Chemical Processes and Environmental Materials, National Research Council of Canada, Ottawa, ON, K1A 0R6, Canada
Source	Macromolecules 2004, 37(17), 2442-2446 CODEN: MAMA0B(1508) 0204-6937
Document Type	Journal
Language	English
Abstract	





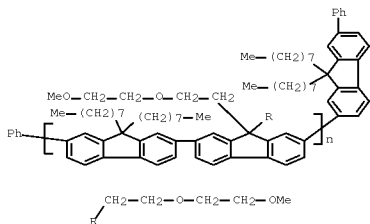


Language				
Patent information				
PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003033544	A	20031106	JP 2002-123730	20020424

ABSTRACT  
The compound contains (1) 40 weight% carbanes or catenanes having light-emitting organic groups and charge-transfer organic groups, and 10-40 weight% vinylcarbazole. The preferable structure for carbanes or catenanes are A substituted on each benzene ring of I or II (A, B, X = H, halogen, alkyl, alkoxy with at of A, B, and X being YmZn, Y = bivalent organic group; Z = light-emitting organic group; charge-transfer organic group; m, n = 1, n = integer of 1-16).

HS Structure  
CAS Registry Number  
548670-70-0 CAPUS

Chemical or Trade Name  
Regd. No. 1, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 208, 209, 210, 211, 212, 213, 214, 215, 216, 217, 218, 219, 220, 221, 222, 223, 224, 225, 226, 227, 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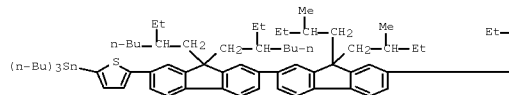


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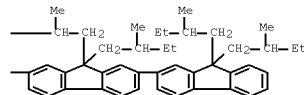
US ANDREWER 57 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN  
Accession Number: 500370700 CAPLUS [Fulltext](#)  
Document Number: 14017062  
Title: Monodisperse Glassy-Nematic Conjugated Oligomers with Chemically Tunable Polarized Light Emission  
Author(s): Geng, Yantao; Chen, Andrew C. A.; Ou, Jian; Chen, Shao-H.; Hubak, Kevin; Vashit, Rakesh M.; Tang, Ching W.  
Patent Assignee/Corporate Source: Department of Chemical Engineering and Laboratory for Laser Energetics, Center for Optoelectronics and Imaging, University of Rochester, Rochester, NY, 14623-1212, USA  
Source: Chemistry of Materials (2009), 15(2), 455-460 CODEN: CMATDH; ISSN: 0867-4756  
Document Type: Journal  
Language: English  
Abstract: A novel series of monodisperse conjugated oligomers were synthesized by inserting varied segments into bisemitting oligoethynylene to complete the side group of light emission. Quantum mech. calcn. revealed that the electron transfer dipole is largely parallel to the long axis of the main segments responsible for light emission. The orientational order parameter characterizing mol. alignment in thermally processed glassy-nematic films was evaluated at 0.75 to 0.97 for 12-alkylphenyl derivatives. With an emission lifetime also ranging from 8.6 to 11.7 ns, polarized photoluminescence provided further evidence that the long axis of the oligo ethynylene is aligned with the nematic director. Polarized organic light emitting diodes (OLEDs) comprising selected materials resulted in red and yellowish green light emission with dichroic ratios of 14.4 and 18.0 and luminance yields of 0.55 and 5.59 cd/m<sup>2</sup>, resp. These two sets of data represent the best performance to date of red and green polarized OLEDs.  
Hil 23 citation

CAS Registry Number: 631821-08-0 CAPLUS  
Chemical or Trade Name: Stannane, [5-[9,9-bis(4-ethylphenyl)-9',9'',9''',9''''-tetraakis(2-methylphenyl)-2,2',2'',2''',2''''-pentaacetylene-10-ylidene]-2-ethylmethyl]tributyl- (KCl) (CA INDEX 3008)

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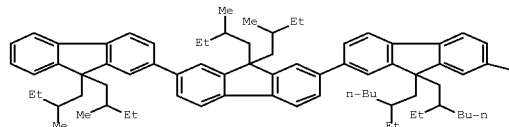


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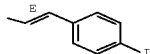


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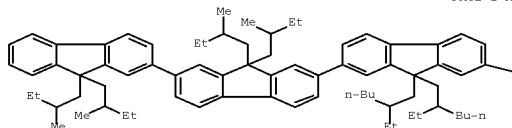


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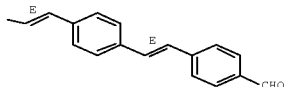


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Chemical or Trade Name: Stannane, [5-[9,9-bis(4-ethylphenyl)-9',9'',9''',9''''-tetraakis(2-methylphenyl)-2,2',2'',2''',2''''-pentaacetylene-10-ylidene]-2-ethylmethyl]tributyl- (KCl) (CA INDEX 3008)

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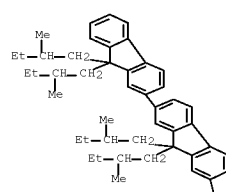


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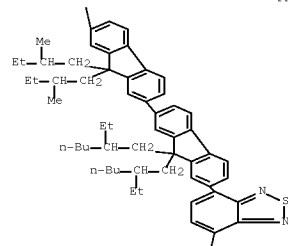


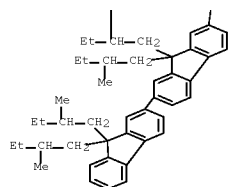
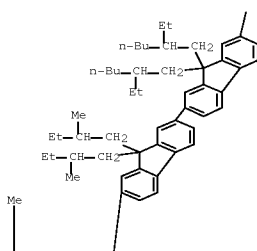
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Chemical or Trade Name: Stannane, [5-[9,9-bis(4-ethylphenyl)-9',9'',9''',9''''-tetraakis(2-methylphenyl)-2,2',2'',2''',2''''-pentaacetylene-10-ylidene]-2-ethylmethyl]tributyl- (KCl) (CA INDEX 3008)

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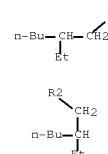
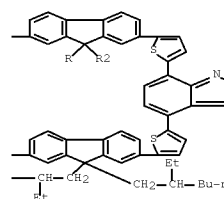
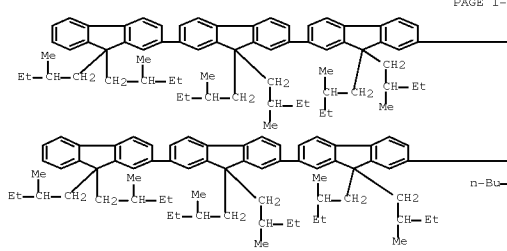


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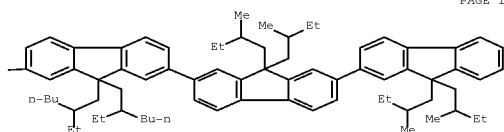
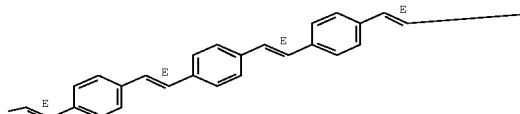
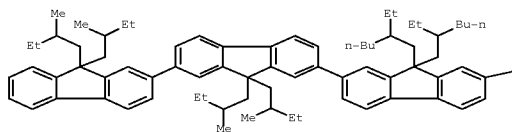


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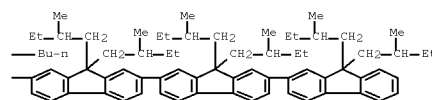
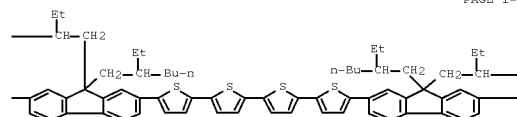
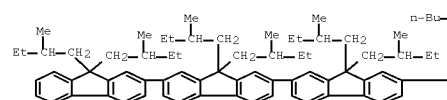
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CAS Registry Number  
630826-29-0 CAPLUS

Chemical or Trade Name  
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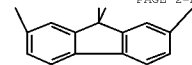
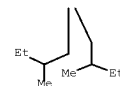
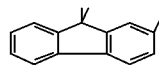
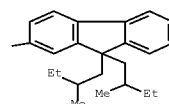
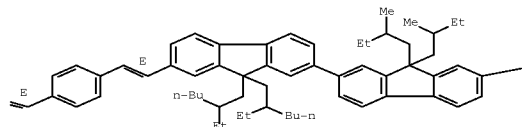
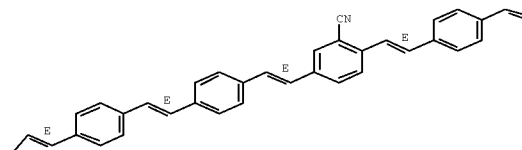
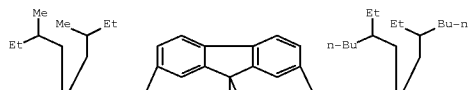


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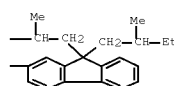
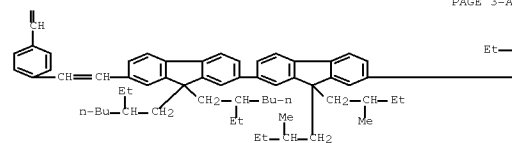
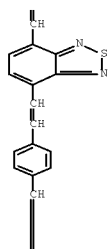
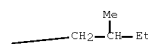
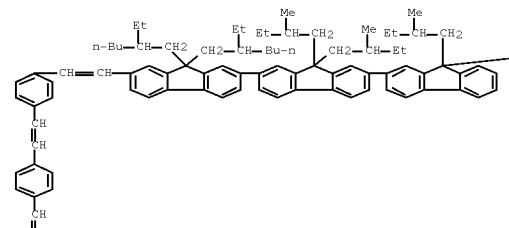
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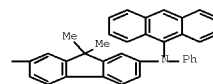
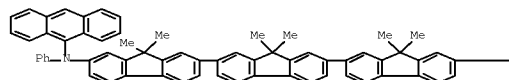


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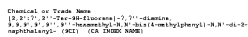
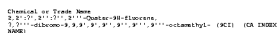
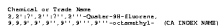
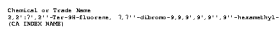
Chemical or Trade Name  
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CAS Registry Number  
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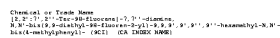
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(CA INDEX NAME)



Chemical or Trade Name  
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NAME)



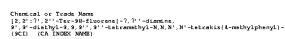
Chemical or Trade Name  
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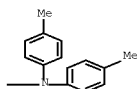


Chemical or Trade Name  
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-amine (HMD)



Chemical or Trade Name  
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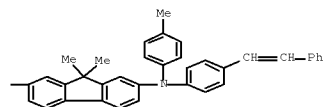


CAS Registry Number  
607729-16-4 CASUS

Chemical or Trade Name  
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(KCI) (CA INDEX NAME)

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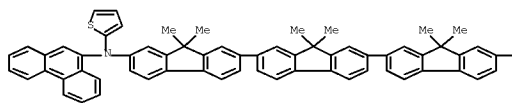
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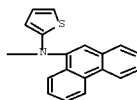
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(KCI) (CA INDEX NAME)

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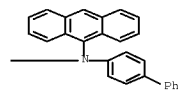
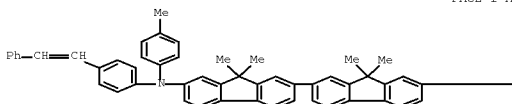
PAGE 1-B



CAS Registry Number  
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Chemical or Trade Name  
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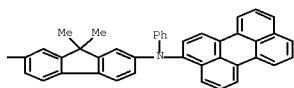
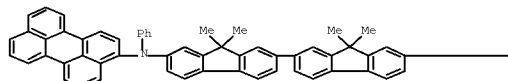
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CAS Registry Number  
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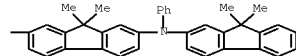


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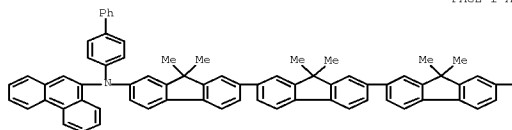
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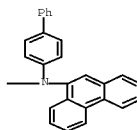
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(KCI) (CA INDEX NAME)

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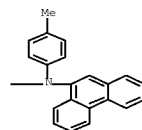
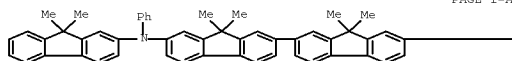
PAGE 1-B



CAS Registry Number  
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Chemical or Trade Name  
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(KCI) (CA INDEX NAME)

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2002E13603 CAPUS Epublet

Document Number  
14010285

Title  
Single polarized and efficient blue organic light-emitting diode using monodisperse glassy nematic oligofluorenes

Author(s)  
Coffey, Sean W.; Chang, Yanhou; Chen, Jiahe H.; Kulkarni, Ravin; Vash, Kathleen M.; Tang, Cheng W.

Full Text Available  
Department of Chemical Engineering, Center for Optoelectronics and Imaging, University of Rochester, Rochester, NY, 14623-1212, USA

Source  
Advanced Materials (Weinheim, Germany) (2005), 19(14), 1176-1180 CODEN ADVNEM; ISSN 0955-4666

Document Type  
Journal

Language  
English

Abstract  
Monodisperse glassy nematic oligofluorenes, such as poly(2,2',6,6'-tetramethyl-4,4'-biphenyl) (PMB) and poly(2,2',6,6'-tetramethyl-4,4'-biphenyl) (PMB) and poly(2,2',6,6'-tetramethyl-4,4'-biphenyl) (PMB) were used for the fabrication of single polarized and efficient blue thin organic light-emitting diodes (OLEDs). Despite chemical purity and state of material processing, the monodisperse films resulted in the highest electroluminescence (EL) device efficiency observed to date. These OLEDs based on monodisperse oligofluorenes showed a deeper blue emission with a higher luminance (4000 cd/m²) than those prepared with polyfluorenes. At almost the same film thickness, the EL device efficiency increased with an increasing chain length due to higher degree of crystal real alignment. The former film had the higher EL device efficiency due to the stronger surface anchoring furnished by the crystalline alignment layer.

CAS Registry Number  
560562-13-4 CASUS

Chemical or Trade Name  
2,2',6,6'-tetramethyl-4,4'-biphenyl  
Fluorene, 9,9'-di-(1,1'-biphenyl)-4,4'-di-2-phenylthiophenyl-  
(KCI) (CA INDEX NAME)

Accession Number  
2003-472573 CAPLUS Eub-565  
Document Number  
130-60163

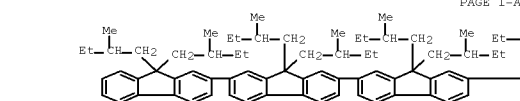
Title	Organic electroluminescent material using calixarene or calixarenesulfone derivative
Author/inventor	Mimoto, Junji; Kawabata, Yuichiro; Otsu, Toshiaki
Patent	Asahi Glass Co., Ltd. Tokuyama Corporation, Japan
Source	PCT Int. Appl., 140 pp. CO.DEN: P19X02
Document Type	Patent
Language	Japanese
Publication	Patent

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003050201	AL	20030419	WO 2002-2912021	20021208
AT 2002354442	AL	20030423	AT 2002-354442	20021208

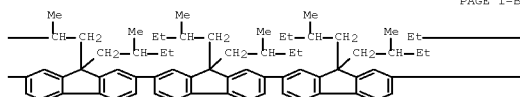
**Abstract**

The invention refers to an organic electroluminescent materials suitable for spin coating, comprising: a carbazene or carbazocarbene derivative with an organic luminescent group and/or an organic charge transport group, such as 4-[1-(2,2-diphenylvinyl)-biphenyl-2-phenylvinyl]phenyl.

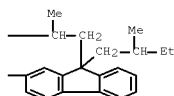
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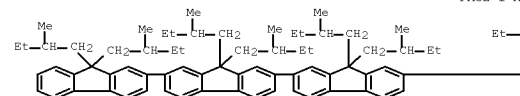
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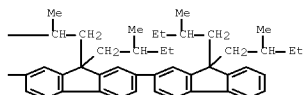
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891570-91-2 CAS#118

Chemical or Trade Name  
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2,2,3',3',3'',3'',3''',3''',3''''-decakis(2-methylbutyl)- (CA INDEX

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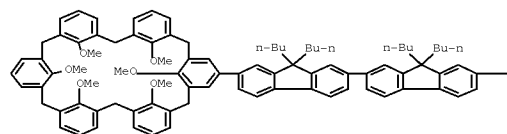
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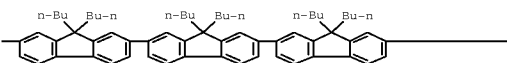
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U8 ANSWER 60 OF 77 CAPLUS COPYRIGHT 2010 ACS on STM

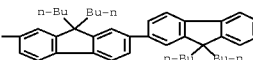
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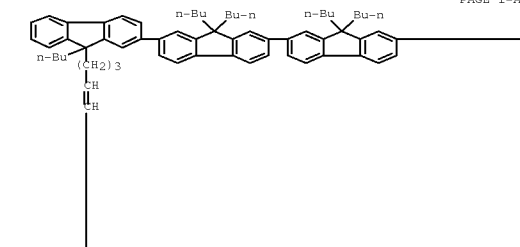
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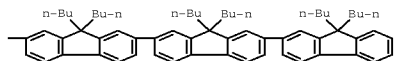
CAS Registry Number  
54662-35-3 CAPLIB

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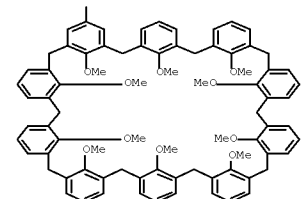
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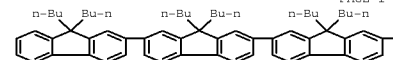
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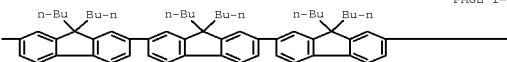
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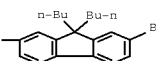
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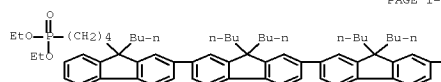
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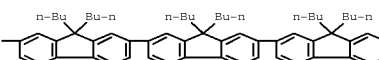
CAS Registry Number  
54653-72-0 CASE 115

**Chemical or Trade Name**  
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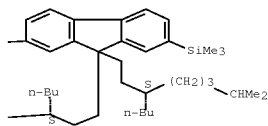
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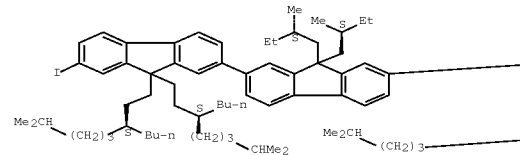


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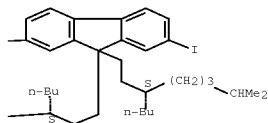


CAS Registry Number  
491550-04-5 CAPUS  
Chemical or Trade Name  
2,2'-(2,2'-Diphenylsulfone-9,9',10'-diylbis[1,1'-bis(4-methyl-7-methylthio-7'-yl)-5-iodo-9',9'-bis(2,2'-dimethylthio)]-1,1'-diyl) (ICL) (CA INDEX NAME)

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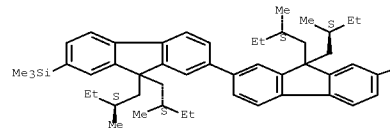


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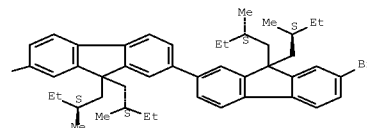


CAS Registry Number  
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Chemical or Trade Name  
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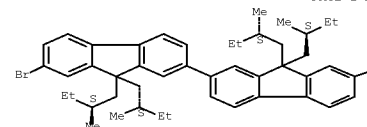


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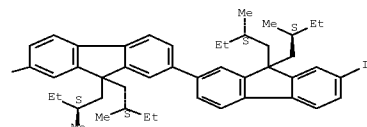


CAS Registry Number  
491550-07-8 CAPUS  
Chemical or Trade Name  
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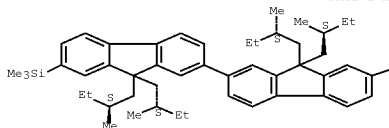
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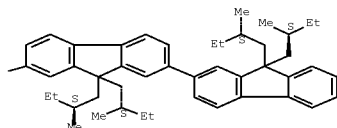
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Chemical or Trade Name  
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Chemical or Trade Name  
Bilane, 1,1'-(2,2'-Diphenylsulfone-9,9',10'-diylbis[1,1'-bis(4-methyl-7-methylthio-7'-yl)-5-iodo-9',9'-bis(2,2'-dimethylthio)]-1,1'-diyl) (ICL) (CA INDEX NAME)

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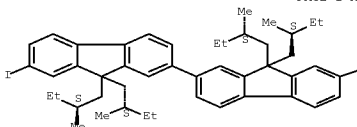


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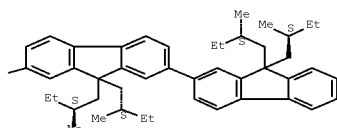


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Chemical or Trade Name  
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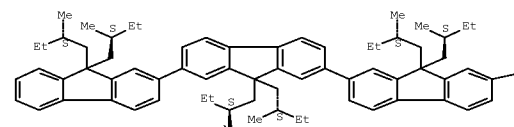


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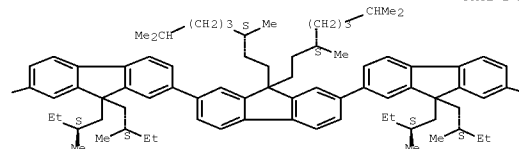


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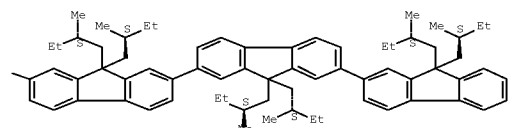
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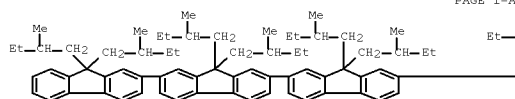


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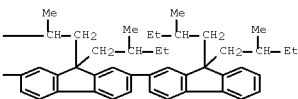


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Chemical or Trade Name  
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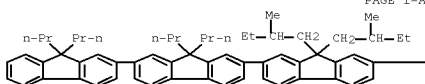


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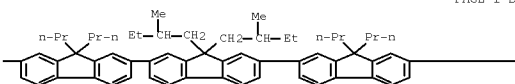


CAS Registry Number  
491890-89-7 CAPUS  
Chemical or Trade Name  
2,2'-(1,1'-biphenyl-4,4'-diyl)-4,4'-bis(2-ethyl-2-methylpropyl)-  
fluorene, 2,2'-(1,1'-biphenyl-4,4'-diyl)-4,4'-bis(2-ethyl-2-methylpropyl)-  
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fluorene (WCI) (CA INDEX NAME)

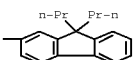
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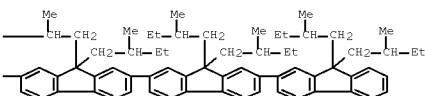


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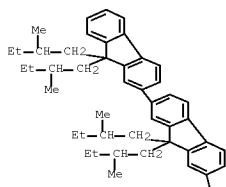
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Chemical or Trade Name  
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fluorene, 2,2'-(1,1'-biphenyl-4,4'-diyl)-4,4'-bis(2-ethyl-2-methylpropyl)-  
fluorene, 2,2'-(1,1'-biphenyl-4,4'-diyl)-4,4'-bis(2-ethyl-2-methylpropyl)-  
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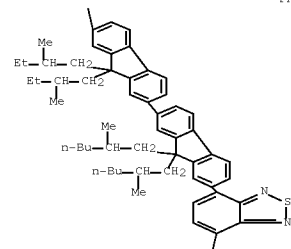


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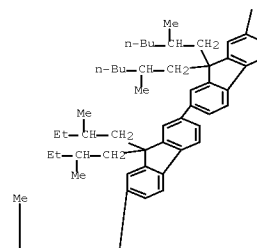
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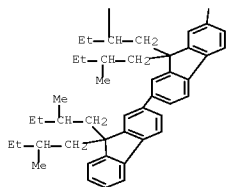


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ON CITING REF CONT: 1 THERE ARE 1 CAPUS RECORDS THAT CITE THIS RECORD  
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LF ANDREWER 64 OF 77 CAPUS COPYRIGHT 2010 ACS on STN  
Accession Number: 2010E6044 CAPUS 640560

Document Number: 139134024

Title: Electrochemical and fluorescent properties of alternating copolymers of 9,10-bis(alkyl)fluorene and oxadiazole as blue electroluminescent and electron transport materials

Author(s): Ding, Jinfu; Tan, Yu; Gao, Michael; Rowan, Jacques; D'Imort, Marie

Funded By: Research Corporation Source

Institute for Chemical Process and Environmental Technology, National Research Council Canada, Ottawa, ON, K1A 0R6, Can

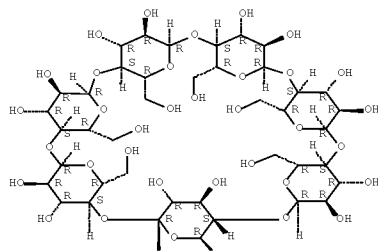
Source: Journal of Optics A: Pure and Applied Optics (2002) 4(8), 1287-1292 CODEN: JOAOPH, ISSN: 1464-4256

Document Type: Journal

Language: English

Abstract:

The properties of alternating copolymers of 9,10-bis(alkyl)fluorene and oxadiazole (FOx) copolymers have been studied by cyclic voltammetry (CV), photoelectrochemistry (PEC) and electroluminescence (EL). The copolymers contained oxadiazole units with different lengths (n = 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 76, 77, 78, 79, 80, 81, 82, 83, 84, 85, 86, 87, 88, 89, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129, 130, 131, 132, 133, 134, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 145, 146, 147, 148, 149, 150, 151, 152, 153, 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164, 165, 166, 167, 168, 169, 170, 171, 172, 173, 174, 175, 176, 177, 178, 179, 180, 181, 182, 183, 184, 185, 186, 187, 188, 189, 190, 191, 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203, 204, 205, 206, 207, 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US ANDREWER 66 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number 200273037 CAPLUS Epub

Document Number 158114052

Title

Quantum emission from polyfluorene: The role of oxidation

Author(s) Zhai, Zhen; Fagan, Alexander; Henkel, Emmanuel; Beljonne, David; Bredas, Jean-Luc; Scharif, Patrick; Loh, Eric J. W.

Patent Assignee/Corporate Source Institut für Festkörperelektronik, Technische Universität Chemnitz, 09105, Chemnitz, Germany

Source Journal of Chemical Physics (JCP), 117(4), 4754-4762 CODEN: JCPDAB; ISSN: 0021-9606

Document Type Journal

Language English

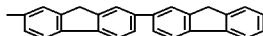
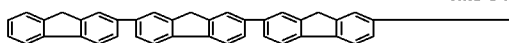
Abstract

Polyfluorene-type materials are widely used in polymer-based light-emitting devices. In their pristine state, they emit in the deep blue spectral region. During operation, they appear, however, as a broad emission peak at approx. 2.2 eV. This observation has usually been attributed to aggregation or excimer formation. Recently, photo-induced electrocyclic ring closure of polyfluorene chains results in a broad emission band, which can also be attributed to emission from a specific region. In this contribution, the authors apply quantum-chemical techniques to gain a detailed understanding of the optical properties of polyfluorene containing ketone defects. In particular, the authors compare model systems for polyfluorene with the ketone-containing counterparts, focusing on the influence of excited-state localization effects. The results of these calculations are confirmed by experimental studies on model copolymers of fluorene and 9-fluorenone.

HS Structure

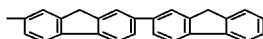
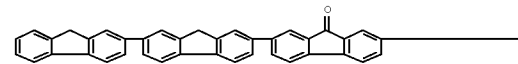
CAS Registry Number 44395-97-0 CASUS

Chemical or Trade Name 2,2'-(1,1'-biphenyl-4,4'-diyl)-9,9'-bifluorene (BIBF) (CA INDEX NAME)



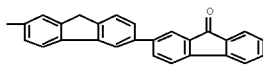
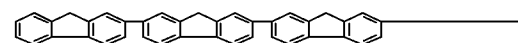
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CAS Registry Number 44395-97-0 CASUS

Chemical or Trade Name 2,2'-(1,1'-biphenyl-4,4'-diyl)-9,9'-bifluorene (BIBF) (CA INDEX NAME)



ON CITING REF CONT: 149 THERE ARE 141 CASUS RECORDS THAT CITE THIS RECORD (141 CITINGS)

US ANDREWER 67 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number 200273038 CAPLUS Epub

Document Number 158114053

Title

Synthesis and characterization of spiro-linked polyfluorene: a blue-emitting polymer with controlled conjugated length

Author(s) Wu, Fangyue; Duda, Rajkumar; Reddy, D. Sahadev; Shi, Ching-Fong

Patent Assignee/Corporate Source Department of Applied Chemistry, National Chiao Tung University, Hsin-Chu, 30005, Taiwan

Source Journal of Materials Chemistry (JMC), 12(10), 2063-2067 CODEN: JMACEP; ISSN: 0959-4428

Document Type Journal

Language English

Abstract

The synthesis and characterization of a fluorene-spirofluorene alternating copolymer, P(F-co-SEF), are described. In the case of the spiro-segment, the two fluorene rings are orthogonally arranged and connected through a ketone-bridged carbon atom (the spiro center). As a consequence, the polymer chain periodically rigidifies, with an angle of 90° at each spiro-center. This structural feature not only preserves the rigidity of the polymer

chain but also prevents the stacking of the polymer backbone, resulting in an improvement in both thermal and spectroscopic stabilities. Comparing the absorption and emission spectra of P(F-co-SEF) and of a fluorene reference compound, it was revealed that P(F-co-SEF) possesses a well-defined conjugated length. The polymer can serve as a host matrix to effectively transfer its excitation energy to a derivatized polyene diene, yielding an efficient blue light-emitting layer.

HS Structure

CAS Registry Number 249702-01-2 CASUS

Chemical or Trade Name 2,2'-(1,1'-biphenyl-4,4'-diyl)-9,9'-bifluorene (BIBF) (CA INDEX NAME)



ON CITING REF CONT: 59 THERE ARE 59 CASUS RECORDS THAT CITE THIS RECORD (59 CITINGS)

US ANDREWER 68 OF 77 CAPLUS COPYRIGHT 2010 ACS on STN

Accession Number 200264025 CAPLUS Epub

Document Number 137358703

Title

The (S)-dibenzofluorene: Highly Efficient Blue Emitting with Promising Electrochemical and Thermal Stability

Author(s) Wang, Jian-Yang; Chen, Yuh-Yih; Chen, Ruei-Tang; Wang, Chung-Feng; Lin, Yu-Ting; Chang, Hui-Hsien; Hsueh, Peng-Yuan; Wu, Chung-Chih; Chen, Chung-Hsien; Su, Yuh-Kuei; Lee, Guan-Huang; Peng, Zhe-Ming

Patent Assignee/Corporate Source Graduate Institute of Electro-Optical Engineering and Graduate Institute of Electronics Engineering, Department of Electrical Engineering, National Taiwan University, Taipei, 106, Taiwan

Source Journal of the American Chemical Society (JACS), 124(16), 11576-11577 CODEN: JACSAT; ISSN: 0002-7066

Document Type Journal

Language English

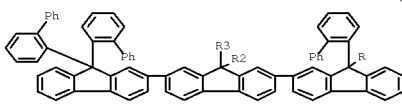
Abstract

The (S)-dibenzofluorene was synthesized by a Suzuki-Miyaura reaction of 2-bromofluorene (1) and 2,7-dibromo-9-fluorenone (2) with high isolated yields (82-86%). The x-ray structure anal. of the (S)-dibenzofluorene (3a) revealed that the conjugated chromophore adopts a helical conformation. This conformation effectively suppresses the steric interaction between the fluorene moieties and prevents inter-molecular interactions. The introduction of aryl groups at the C6 position of fluorene was highly beneficial to the thermal and morphological stability of these oligomers. These fluorene-aryl-ether blue fluorenes with excellent quantum yields both in solution (up to 100%) and in solid state (88-92%), and possesses reversible redox properties. Highly efficient blue light-emitting OLED devices were fabricated using 3a and 4a as emitters, as well as low temperature. The devices exhibit low turn-on voltage (approx. 5 V) and high (3.5) external quantum efficiency (2.5-3%).

HS Structure

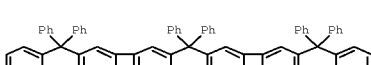
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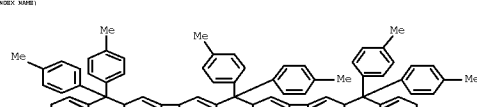
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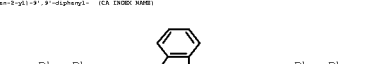
CAS Registry Number 474651-43-9 CASUS

Chemical or Trade Name 2,2'-(1,1'-biphenyl-4,4'-diyl)-9,9'-bifluorene (BIBF) (CA INDEX NAME)



CAS Registry Number 474651-43-9 CASUS

Chemical or Trade Name 2,2'-(1,1'-biphenyl-4,4'-diyl)-9,9'-bifluorene (BIBF) (CA INDEX NAME)

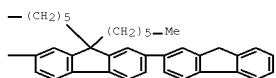
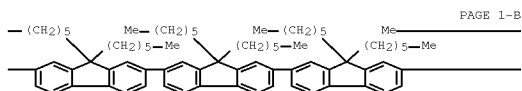
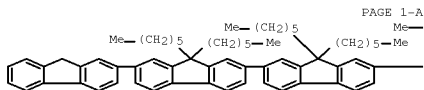


Chemical structure of poly(2,5-bis[2-ethyl-2-(n-butyl)acryloyl]thiophene) (P2BETA). The structure shows a repeating unit of a thiophene ring substituted at the 2 and 5 positions with 2-ethyl-2-(n-butyl)acryloyl groups. The side chains are represented as n-Bu and Et. The polymer chain is terminated with a hexamethylene group, -O(CH<sub>2</sub>)<sub>6</sub>-O-.



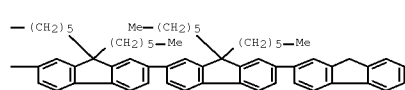
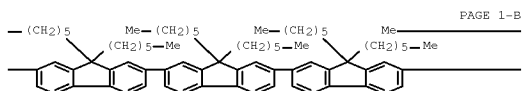
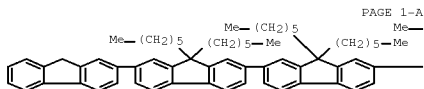






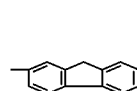
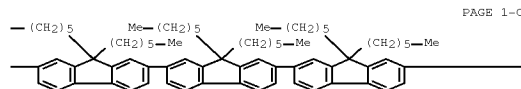
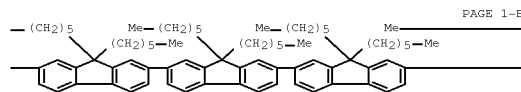
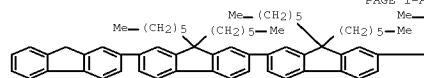
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334798-14-3 CAPLUS

Chemical or Trade Name  
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2,2'-(2,2',3,3'-tetrafluorodiphenylmethane)-4,4'-bis[4-(pentafluoropropyl)phenyl]-5,5'-bibenzimidazole  
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Accession Number  
1000174770 CAPLUS E02561

Document Number  
100245083

Title  
Circularly polarized light generated by photoexcitation of luminescent inorganic liquid-crystal films

Author(s)  
Chen, S. H.; Katoh, D.; Schmidt, A. W.; Mastaglio, J. C.; Tuller, T.; Blanton, T. N.

Patent Assignee/Corporate Source  
Materials Science Program, University of Rochester, Rochester, NY, 14623-1212, USA

Source  
Nature (London) (1999), 397(6719), 806-808 CODEN NATURE; ISSN 0028-0836

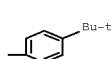
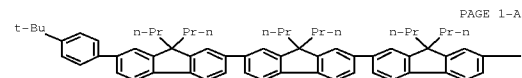
Document Type  
Journal

Language  
English

Abstract  
Optical information processing, display and storage can be accomplished with linearly or circularly polarized light. In passive (nonemitting) devices, linear polarization can be produced by anisotropic absorption of light, whereas circular polarization was achieved by selective reflection of unpolarized light propagating through a cholesteric liquid-crystal film. Active (light-emitting) devices capable of polarized emission are also needed. In principle, optical electronic emission of materials containing uniaxially and helically arranged luminescent should produce linearly and circularly polarized emission, respectively. The former is easier to achieve and is readily measured, whereas the latter is more difficult. Here the authors report the generation of strongly circularly polarized photo-luminescence from films of glass-forming cholesteric liquid crystals in which are embedded light-emitting diodes. This new material apparently induced alignment of the luminescent to a degree that produces almost pure circular polarization within the 400-430-nm wavelength band of the emitted light. The authors anticipate that complete films of this sort might find applications either as passive devices, such as color-storage projects and memory displays.

HS Structure  
CAS Registry Number  
100459-97-1 CAPLUS

Chemical or Trade Name  
2,2'-(2,2',3,3'-tetrafluorodiphenylmethane)-4,4'-bis[4-(pentafluoropropyl)phenyl]-5,5'-bibenzimidazole  
2,2'-(2,2',3,3'-tetrafluorodiphenylmethane)-4,4'-bis[4-(pentafluoropropyl)phenyl]-5,5'-bibenzimidazole (ACI) (CA 23000 3000)



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